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ART. I.—MEDICAL INSTITUTIONS OF NAPLES.

Osservazioni sopra il celebre Stabilimento D'Aversa nel Regno di Napoli e sopra Molti altri spedali d'Italia destinati alla Reclusione e cura de' Pazzi, con alcune considerazioni sopra i perfezionamenti di che sembra suscettivo questo genere di Stabilimenti. Opera del Dottor DOMENICO GUALANDI, *Medico direttore de' Dementi nello spedale di S. Orsola in Bologna, &c. &c.* 8vo, *Bologna*, 1823.

IN the last number of this journal we undertook to present to our readers a description of the medical institutions of Naples, and hoped to complete, in this article, the consideration of the schools and hospitals of that city, in order to pass, in the present number, to the examination of other points connected with our subject. Much, however, to our surprise, and we do not hesitate to acknowledge to our regret, the subject proved so extensive, and our materials so copious, that instead of being able to comprise the full account of the establishments to which we have alluded in the number of pages

usually allotted to a single article, we were forced to divide it into two parts. The present is therefore offered as a continuation of the preceding, and will complete what we have to say in relation to the hospital and *hospices* of the Neapolitan metropolis.

We commence with the *Ospedale dell' Annunziata*, or the foundling hospital. This establishment was founded in 1304, by Nicholas and James Scondito, richly endowed by Sancia, the wife of king Robert, in 1309, and greatly enlarged by queen Joanna the Second, in 1348. The building presents an imposing appearance, and is large in all its dimensions. The latter circumstance, indeed, owing to the objects for which the house was erected, was indispensable; for the hospital may be regarded as a triple institution, one part of which is destined for the accommodation of the foundlings and their nurses; a second, as an infirmary for such of the former as are affected with disease; while a third is reserved for the reception and maintenance of all the girls who have been received during their infancy in the establishment, and have been fortunate, or perhaps unfortunate enough, to survive.

The establishment for the foundlings, and the hospital attached to it, contained, in the year 1828, several hundred infants, the majority of whom were sick, or slightly indisposed. They are arranged in wards of great dimensions; one of which can easily accommodate between one and two hundred infants, together with their nurses. Each of these women has two children under her charge, placed in a cradle situated near her bed. The whole establishment is wretchedly kept. The wards, and particularly the smaller ones, are but very imperfectly ventilated, and emit a very disagreeable smell, increased and maintained by the practice of keeping the windows closed, even in moderate weather. This practice should, we think, be reprobated every where, and must be regarded as particularly useless at Naples, and in many other parts of Italy, where, in consequence of the system of bandaging the bodies of infants from head to foot, and covering their bodies and heads very warmly, the only parts that could possibly suffer from the freest admission of cold air, would be the face and lungs; an inconvenience that might easily be guarded against. It is a matter of astonishment and regret, that the plan adopted in our

own country, and in some of the northern parts of Europe, in relation to the manner of rearing children, should not ere this have been imitated in the fine country whose medical institutions form the subject of our present investigations; and that its inhabitants should still cling with pertinacity to their old prejudices, in relation to the advantages of bandages or swathing clothes; the danger of a free admission of pure air into the apartments of infants; as well as of frequent ablutions. In the south of Europe the idea is almost universal among the lower classes, and but too prevalent among the higher, and, we would imagine, the better informed orders of society, that the practice now pursued of swathing infants,—of covering them with piles of warm clothes, even in the mildest weather, and keeping them confined, particularly when very young, in close rooms, is the only rational and safe one that can be suggested. We have often seen the nurses of foundling hospitals in Italy stare at the simple mention of the plan pursued among us, and we were accused, by mothers and fathers in the higher circles, of barbarity, for allowing an infant's body to remain unswathed, and for putting simple socks on its feet, and a light covering on its head. It is not to be supposed, however, that such prejudices still prevail among the members of the profession in the south of France and in Italy. With few exceptions, they understand, as well as we do, the proper rules to be pursued in the physical education of children. It is among the people that such antiquated notions exist; and until they are eradicated, there is little chance of another, and more advantageous system being substituted for the one now in favour. With respect to Naples, it would appear that it is time a different plan should be pursued in reference to the management of the infants received at the hospital *Dell' Annunziata*; for the success of the present one has not heretofore proved very encouraging, as may readily be inferred from the fact, that out of 2500 children received annually in that establishment, one-third die before they have progressed beyond the period of infancy*.

* In his *Medical Statistics* Dr Hawkins states, that the mortality at this hospital is one in five. We do not know where Dr H. procured his information. Ours was obtained at the hospital itself, in 1828. Great, however, as a mortality, among infants, of thirty-three per cent, may appear, it is still far short of that

Be this, however, as it may, almost every traveller who has visited the establishment in question, has adduced his testimony in support of the opinion we have advanced relative to the imperfect manner in which it is kept. Dr Otto, in the narrative of his medical tour through Europe, expresses himself in positive terms on the subject, affirming, that the hospital *Dell' Annunziata* is the worst managed in Naples; and stating that the air of the wards is so corrupted, that its impurities can be perceived even in the outer court.

With regard to the third department of this institution, it will be sufficient to state, that it is denominated *Conservatorio*, and consists of large wards containing a considerable number of beds. The wards are kept clean and neat; much more so, indeed, than is usually found to be the case at Naples. They are defective, however, from the light and air they receive being admitted almost exclusively through the doors placed at the extremities. The conservatorio is destined to receive all the girls admitted during infancy in the establishment, and who have attained to seven years of age. There is a small infirmary near the main ward of this department of the Annunziata, where such of the girls as are sick, are placed. The boys who have attained the same age (seven years), are sent to learn trades, or to the *Albergo dei Poveri;* but mostly to some of the convents of the city or neighbourhood, where they receive some education at the expense of those establishments, and either embrace religious orders, or, as more seldom happens, leave these to engage in some branch of trade. The girls, while in the conservatorio, are taught trades suitable to their sex, and various branches of elementary education. They remain there until sent out to service or trade, or until they are married, in which case they receive a small dower.

The hospital we are now describing is situated in a part of the city denominated *Della Forcella*, beyond the *Porta Nolana*, and at some distance from the central and more crowded quarters of this immense metropolis. But though in that respect it possesses some advantages over the *Incurabili* and other hospitals we have already noticed, still it is not free, notwith-

which is noticed at Palermo, where, in 1823, out of five hundred and ninety-seven infants received at the hospital, four hundred and twenty-nine died; being in the proportion of seventy-two per cent.

standing its comparatively retired location, from certain defects dependent on the narrowness and crowded population of the streets by which it is surrounded; a circumstance which, combined with others already mentioned, tends to deprive it of that full supply of pure and wholesome air, so indispensably necessary in establishments of this kind.

The hospital of *San Francisco*, situated beyond the Porta Capuana, is a large establishment destined for the accommodation of sick prisoners of both sexes. Its foundation is due to the viceroy Juan Zanica, duke of Pietrapersia, and must be regarded as not the least advantageous among the acts of the government of that nobleman; since, before his time, the sick prisoners were kept in the state prison, *La Vicaria*, which was crowded to excess, and rendered highly insalubrious by the intermixture of the sick with the healthy. The hospital of San Francisco is sufficiently large to accommodate four hundred patients. The females are placed on the first floor, and the men on the second and third; the basement story being reserved for household purposes. The building has more the appearance of a jail than of an hospital, and partakes of all the defects incident to Italian prisons generally; being ill ventilated, noisy, and filthy in the extreme. It is here that the insane are sent on trial previous to their being transferred definitively to the asylum of Aversa. But of this we shall have occasion to speak more in detail when on the subject of this once celebrated institution.

The *Ospedale Santa Maria della Fede*, situated in the suburb of the *Porta Capuana*, and beyond the establishment we have just noticed, is comparatively small, being capable of accommodating little more than one hundred patients. It is under the immediate direction of the police, and reserved for the admission of prostitutes labouring under the venereal disease. Without doubt it is the most disgustingly filthy public establishment of the kind, to be met with anywhere, and is scarcely a degree better, in point of nicety, than our common hog-pens. Its wards are irregularly distributed, imperfectly ventilated, poorly furnished, and dreadfully kept. One would be almost inclined to believe that this establishment is the place of rendezvous of a large portion of the fleas and other vermin of the kingdom of Naples, and every one who has

travelled in that beautiful country knows, from personal experience, that the quantity of these is greater there, than perhaps in any corner of the civilized world,—Spain always excepted.

The Hospital *Santa Maria della Fede* is divided into several departments. Thus, there is a ward denominated *Seraglio*, to which are consigned all the prostitutes who, though free from disease, have neglected to present themselves for the purpose of submitting to the inspection which all public women must undergo, and are punished for thus violating the police regulations, by confinement during several days. Another part of the house is occupied by those women, who, in addition to the disease for which they are admitted, are affected with some febrile complaint. A third is reserved for those who are undergoing a course of mercury. Finally, another part of the house is appropriated to the accommodation of those who, having repented of their mode of life, are making preparation for entering a house of penitence or a convent. This department is the least objectionable, in point of neatness, of all those into which the hospital is divided; but it is the smallest, and, with a few honourable exceptions, appears to be inhabited by the oldest and the ugliest of the inmates.

The present hospital is well situated for the convenience of those who constitute its population; it is in the very centre of the most demoralized part of the city,—every street leading to it being inhabited exclusively by the lowest class of prostitutes. They have, therefore, but one step to make from their dwelling to the hospital, and vice versa. But while the police has thus shown some attention to the convenience of the fair inhabitants of *La Fede*, the military authorities do not appear disposed to allow the soldiers of the garrison to show off their gallantry by paying their devoirs to these syrens; for sentinels are placed at the entrance of all the streets leading to the hospital, in order to prevent any individual wearing uniform from passing into them, and having intercourse with their female inhabitants:—with what success, we shall be able to form some idea, when on the subject of the military hospitals of Naples.

With a view to guard against the diffusion of the venereal disease, the government employs several physicians or surgeons to examine, a certain number of times a month, all

prostitutes registered at the police office. For this purpose, they are assembled together in numbers, more or less considerable, and such among them as are discovered to be sick, are sent to the hospital. This method, which is analogous, in many respects, to that adopted and found advantageous in other countries of Europe, is far, however, from proving very successful at Naples, owing to causes very little creditable to those charged with putting it into operation. Thus we were assured, by individuals well informed on the subject, that the service in question, like many others, indeed, at Naples, is very imperfectly performed—it often happening that prostitutes, particularly those of the more elevated orders, request the examining physician to give them, though sick, a certificate of health, which of course exempts them from confinement at the hospital, with the promise that he shall have their custom and be paid for his services. This is too readily agreed to, and these girls, while under treatment, continue to receive the embraces of unsuspecting individuals to whom they communicate the disease. With these facts in view, we cannot refuse to conclude, that the government is not so much to blame as the *employés*, unless, indeed, it be for not selecting, to fill the situation of inspectors, men whose integrity may be depended upon, and for not keeping an eye on those employed, and enforcing the laws on all who are guilty of a breach of trust.

We shall have occasion to speak of the method employed at Naples in the treatment of the venereal disease, when on the subject of the state of medical practice in that city.

The next hospital which deserves our notice, is denominated *Ospedale dei Pellegrini.* It is a small but neat establishment, situated in a populous part of the city. It belongs to, and is under the special charge of, the confraternity of the Pellegrini. In this hospital are admitted individuals of the male sex who have met with accidents; the females being sent to the *Incurabili.* Every possible care is bestowed on, and the necessary treatment afforded indiscriminately to all those who are brought in. The medical attendants consist of one physician, four principal and ten or twelve assistant surgeons;—a goodly number, considering that in the whole hospital there is only one ward open for the accommodation of the sick, the number of

whom must consequently be very limited—amounting to not more, we believe, than from twenty to thirty. In return, the church, the lodging and eating rooms of the officers of the house, as well as of the attendants, occupy a considerable part of the edifice. The former is rich and well ornamented; while the latter are commodious and spacious. In this establishment are (or rather were formerly) also received pilgrims or poor strangers, who are fed, clothed, and lodged at the expense of the order.

It is really a matter of surprise, that so small a hospital for accidents should suffice in a city so large and populous as Naples. The hospital *Della Consolazione* at Rome, the objects of which are similar to those of the present institution, is sufficiently large to contain about 200 patients, and is generally full. Deduct about 80 from this number, for the amount of females contained in it, and we have a total of 120 males treated daily at Rome for accidents, which contrasts greatly with the amount we have stated as existing at the hospital *Dei Pellegrini*; and yet the population of Rome is inferior by more than one half to that of Naples, and the inhabitants of that city are calm and phlegmatic, compared with the Neapolitans, who are noisy, turbulent, and quarrelsome. Inexplicable, however, as these facts may appear, we were repeatedly assured that the hospital of the *Pellegrini* is large enough for the purposes to which it is applied.

There is at Naples, as at Rome, a hospital for the accommodation of convalescents. It is much smaller, however, than that in the latter of these cities, and is open only for the admission of individuals who have been treated at the hospitals *Degl' Incurabili*, *Della Pace*, and *Di S. Elicio*. Unlike what takes place at Rome, the time of residence in the establishment for convalescents is not fixed and limited to three days only, but may be prolonged as long as is required, to insure a perfect recovery. We were informed, however, by Professor Grillo, that although there is a separate establishment for the reception of convalescents, it is the usual custom to send these to their own houses, whenever they express a desire to that effect, and that those only who cannot do otherwise, consent to be sent to the institution in question.

There are four military hospitals in the city of Naples.

Of these, three are appropriated for the accommodation of the land troops, and the fourth to that of the sailors and marines of the royal navy. We commence with the former. The principal one among these is denominated *Ospedale della Trinita*, and is situated on a very high ridge, separating the mass of the city from the quarters of Chiaja, Pozzilipo, &c. Those who have visited Naples, and are acquainted with its topography, will form an idea of the position of this hospital, on hearing that it is placed on the highest point of the Strada Magno Cavallo, and on the road that leads to the castle or fort of St Elmo. From this it results, that the hospital *Della Trinita*, though in the centre of a populous part of the city, commands a magnificent prospect, and a full supply of pure and wholesome air. The building which, since the year 1806, has been made use of for the accommodation of sick soldiers, was, in olden times, a convent, and presents the very few advantages, and the many inconveniences uniformly discovered in buildings that have experienced metamorphoses of this kind. In front is a handsome terrace, ornamented with several rows of fine trees, under which the convalescents, who are allowed to resort to this place for promenade, find, during summer, a comfortable shade, which in this climate is indispensably necessary during warm weather, and often highly acceptable even in winter.

With respect to the internal arrangement of the hospital, it will be sufficient to remark, that it contains several long wards, rather too narrow, and about as well ventilated as those of Italian hospitals generally. The long and wide arcades or porticos, so commonly found in convents, have been converted into wards, by closing up the vacant spaces between the pillars. Besides these, there are several small rooms, principally fitted up for the accommodation of ophthalmic patients. The furniture of these wards is very indifferent in point of quality and appearance, while the cleanliness of the whole establishment, but particularly of the venereal department, is very defective. Indeed, throughout this extensive hospital there is but one ward worthy of notice. It is on the first floor, and is appropriated to surgical cases and recent accidents. This room was formerly the refectory of the monks. It is lofty, wide, well aired, and is paved with marble, arranged in

the manner of large mosaics. Sick officers are also admitted into this hospital, and are lodged in separate rooms fitted up for that purpose with a greater attention to neatness.

At the time we visited the hospital *Della Trinita*, it contained nearly nine hundred patients, of whom at least two hundred were affected with ophthalmia, and a number with venereal complaints. The garrisons of the neighbouring military posts, and particularly of *Gaeta*, furnish a great number of these ophthalmic inmates to the military hospitals of the capital, owing, it is supposed, to the chalky and disagreeably fine dust with which, in dry weather, the air of the country around Naples is impregnated, and to which the soldiers are continually exposed; as well as to the intemperate use of inebriating drinks; to the coldness of the nights succeeding to the heat of the days; to the reflection of the sun, which is very powerful; and, as some think, to contagion. A few years ago the disease assumed a purulent form, and was more destructive to the eyes than it is found to be at present.

The treatment adopted for the cure of this disease, by the surgeons of the house, does not present any thing peculiar or interesting, consisting, as it does, in leeching, sometimes bleeding, emollient applications, saline purgatives, and occasionally emetics. Dr Magliari, one of the surgeons of the establishment, and whom we occasionally attended in his morning visits, informed us, that in cases attended with much sensibility of the eye, he resorted with great advantage to the external application of belladonna; and that when there was considerable engorgement of the palpebral vessels, he cut them out.

A strange and expeditious method of administering medicines is adopted by some of the physicians and surgeons of this hospital. At their morning visits they are followed by a servant, carrying in one hand a large bucket full of a strong solution of purgative salts, and in the other a tumbler. The doctor prescribes, and the servant administers; the whole is the affair of an instant. It is to be remarked that saline purgatives appear to be favourite remedies with many Italian practitioners, and, as we should think, particularly so with those of the present hospital, by one of whom we saw them administered one morning, in the manner just alluded to, to at least

eight out of every ten patients he prescribed for. It is right to state, however, that the majority of these patients were afflicted with ophthalmia, and appeared to us to require the operation of remedies of the kind.

According to Dr Valentin, the medical officers of the hospital *Della Trinita* consisted, when he visited it, of Dr Gentile, physician in chief; M. Gabrielli, surgeon major; and Andrea Salomone and Stephano Trinchera, surgeons. Since that period, Dr Magliari, the learned, intelligent, and active editor of the *Osservatore Medico*, having been reinstated in the army, from which he had been removed at the period of the restoration of the present reigning family, has been appointed one of the surgeons to the institution.

The mortality in the hospital *Della Trinita*, as indeed in almost every other military hospital with which we are acquainted, is small, compared to that experienced in hospitals generally; not amounting, in ordinary times, according to some reports, to more than five per cent of the whole number admitted. In some seasons, however, as, for example, during the prevalence of epidemics, it has been found to exceed eight or nine per cent. Nor are the causes of this comparatively small mortality at the *Trinita* difficult to account for, consisting, as they do, in the natural healthfulness and robustness of the class of individuals admitted in that institution, and in the trifling nature of the complaints for which a large number of the patients are sent thither. A circumstance worth recording, and which, were it not for the respectability of the authorities on which it is reported, we should find some difficulty in crediting, is, that only one individual out of about forty dies of pneumonia or pleuritis, although these complaints are rarely combated by the lancet, but only by small doses of tartarized antimony, powdered digitalis, nitre, &c.

The second military hospital at Naples, in point of importance, is denominated *Del Sacramento*. Like the preceding, it is situated on high ground. It is much smaller, and can accommodate, at most, but three hundred patients. In general it does not contain more than one half this number. But neither this hospital, nor the third, which is called, from the place in which it is situated, *S. Carlos della Regina*, presents any thing relative to organization, distribution, or the method

of treatment adopted, deserving a particular notice in this place. We therefore pass to the consideration of the naval hospital.

This institution, which is undoubtedly one of the neatest and best administered of the kind in the city or kingdom of Naples, is situated in a part of the city denominated *Piede di Grotta.* It fronts the sea, in full view of Capri, and the other islands, and is at a small distance from the royal garden of *Chiaja,* in the *Villa Realle* on one side, and from the Grotta di Pozzilipo on the other. This hospital contains usually little more than two hundred patients, but is large enough to accommodate double this number. The basement story is reserved for the store rooms, offices, &c. while the wards are situated on the second and third floors. Those on the second are occupied by the galley slaves, who are sent hither from the arsenal whenever attacked with disease; and those of the third floor by the sailors and marines of the royal navy. The same care and attention are bestowed on the criminals as on the other inmates of the house, and we believe it would be impossible to distinguish them from the latter, were it not for the circumstance of their retaining their chains under the bed clothes. The wards are smaller than those of the other Neapolitan hospitals, and are placed parallel to each other, and in such a way as to extend from the street to the court. They are provided with large windows at both extremities, and consequently receive, throughout their whole extent, the full benefit of the refreshing and pure air from the sea. Independently of this, they communicate freely with each other laterally; an arrangement which, while it insures a more complete ventilation, was requisite for facilitating the service of the wards.

To this hospital are attached four physicians, four surgeons, and an equal number of assistants. The former consisted of Drs Capoce, Benevento, Folinea, and Del Guidice. Among the surgeons we need only mention Professor Grillo, one of the most judicious, learned, and amiable practitioners in Naples, and of whom we shall have occasion, we hope, to speak in a more particular manner on a future occasion.

It will not be necessary to enter, in this place, into any details relative to the method of treatment adopted by the physicians and surgeons of this hospital, in the management of the or-

dinary diseases they are called upon to combat; as this method presents nothing, at least so far as we could notice or learn, very striking; and, in fact, does not differ essentially from that pursued in the other hospitals, military and civil, or by the practitioners of the city generally. It will, therefore, be more appropriately examined when we come to take a general view of the state of medicine at Naples. We must, however, be allowed a few words on the subject. The medical attendants of the institution under notice treat their syphilitic patients agreeably to the ordinary Neapolitan method, which consists in pushing the use of mercury to a brisk salivation; but in some cases they resort to the plan recommended by their townsman, Cirillo, in his *Osservazioni pratiche intorno alla Lue Venerea*, and which consists in the employment of the ointment of corrosive sublimate, in the form of frictions, to the soles of the feet.

We are not aware that their success is more satisfactory than that obtained elsewhere in the city. They are very fond, and in this respect resemble most of their countrymen, of the imitation of James's powders prepared by MM. Lancelotti and Peppe, two eminent chemists of Naples, who, as Dr Valentin affirms, have been more successful in the preparation of that remedy than had been Pullì, another pharmaceutist of the same city.

The military hospitals are well administered, and are placed under the direction of a council composed of a staff officer, two officers of inferior rank, and the physician and surgeon in chief of the army. Dr Valentin, who derived his information from the most authentic source, mentions, that the government allows only twenty grains (*granos*), equivalent to eighteen cents, a day, for each patient admitted into these institutions. This sum, small as it may appear, is generally more than sufficient to defray all the expenses; a circumstance which all will readily conceive, who are aware of the cheapness of living at Naples.

Near the Royal Naval Hospital is situated the *Real Ospizio de Ciechi di SS. Guiseppe e Lucida;* or, the Royal Asylum for the Blind. Though not, properly speaking, a medical institution, it deserves, as do also one or two others, to which we propose to call the attention of our readers, a brief notice

in this place. Like the naval hospital, it is situated in front of the bay, but is separated from the water by the beautiful garden of *Chiaja*, which extends a considerable distance along the margin of the sea. This noble and useful institution was founded on the 13th of December 1818, by the late King Ferdinand I., and principally through the exertion of Professor Quadri, for the admission of such of the poor as are deprived of the sense of sight. It was modelled upon a similar institution existing, for many years past, at Paris. Besides the blind, this institution contained, at its origin, the deaf and dumb; but, within a few years, these have been removed to the general asylum for the poor. The number of inmates amounted, in 1828, to about one hundred and fifty. The house is kept clean, and presents as much the appearance of comfort as could be expected or desired. Strange as it may appear to those who fully appreciate the advantages resulting from institutions of the kind, the one we are now noticing has lately lost much of its importance and usefulness, owing to the limited degree of patronage afforded to it by government. The younger part of the population of this house are taught reading, as at Paris, by feeling the surface of metallic types, and have some books printed in such a manner that the types, of larger size than ordinary, and unstained with ink, produce, on one side of the paper, a relief sufficiently bold to enable the pupil to distinguish the characters by the touch. Independently of reading, they learn geography, arithmetic, music, &c. When they attain a certain age, they are taught to make baskets and other articles of the kind, and, what is more extraordinary, to work and polish marble. As regards their proficiency in music, we do not hesitate to state, that it is exceedingly clever. We were present at a musical performance, given by a full band of these unfortunate youths, and were highly gratified at the neatness and precision with which they executed some of the finest and most difficult compositions of Rossini. When the deaf and dumb were included among the inmates of this institution, they were taught cabinet-making, and their blind comrades were employed as their assistants. By this means a double advantage was obtained: the inmates were kept busily employed, and an additional source of profit was insured to the establishment.

It is calculated that the daily expenses of each individual do not exceed one carlin (between eight and nine cents), every thing included. They are fed, (by contract), at five and a half grains each. For this small sum they are provided with soup twice, and wine, fruit, and bread once a day. Independently of this, they receive meat for dinner twice a week. We were assured that the number of *employés* was unnecessarily large : a defect too common in public institutions in the south of Europe. By diminishing it, an additional quantity of bread (for the portion now allowed to each individual is too small) might be given, and, perhaps, animal food could be more frequently indulged in. This establishment, constituting a dependency of the Albergo dei Poveri, is governed by the same administration, and is under the particular care of Sig. Angelo Petricca.

By a very natural transition, we pass to the description of the General Asylum for the Poor, the *Albergo dei Poveri;* or, as it is vulgarly called, the *Reclusorio*, or *Seraglio*. Without the least doubt, this establishment is one of the most magnificent in Europe—certainly the most magnificent in Italy, and does infinite honour to its founders, as well as to those by whom it has been supported and administered. In every sense, indeed, it may be regarded as well suited to the objects for which it has been established, and atones for many of the defects noticed in the other charitable houses of the city of Naples. That this is not exaggerated praise, will appear, we are confident, from the brief description we are about offering of the institution. We appeal, without fear, besides, to all travellers who have visited Naples, and have been at all inquisitive on subjects of public charities, for the correctness of what we have stated and intend to state, in relation to the Albergo, confident as we are that, even the most prejudiced against Italian institutions must be forced to change their tone respecting the one which forms the subject of the present remarks.

The Albergo was founded by, and the edifice appropriated to it commenced by order of Charles the Third, who selected for architect, on this occasion, the Chevalier Fuga. Though far from having, as yet, attained its full size, it constitutes one of the largest piles in existence. The external front, in 1828, was, as we were assured, 1300 feet in length, and was not

completed. It is four stories high, besides the attic, and is embellished, in front, with Ionic pillars. When finished, the building will form a perfect square, with four courts in the centre; the intention being to divide the open space included between the four sides of the edifice by transverse buildings. The central point of the open space is occupied by the chapel. These courts are large, and some of them are subdivided into several smaller ones, for the accommodation of the different classes of inmates. With the exception of small portions of the side wings, the front part of the building is the only one so far complete as to admit of being occupied. It is beautifully situated on rising ground, facing a large street called *Foria*, near the outskirts of the city, and on the road to Aversa and Rome. The architecture is imposing, and the traveller who enters Naples from Rome is struck with astonishment as he passes along this stupendous edifice. In the centre of the façade is a portico, with three arcades, to which access is obtained by means of a double flight of steps. Of these three arcades, the one to the right leads to the male department, while that on the left opens into the female department,—the sexes being effectually separated from each other. The central arcade leads to the church. When our readers are apprised of the fact, that the four sides of the edifice will each measure upwards of 1500 feet in length, and when they recollect that the open space in the centre is to be intersected by similar buildings, all four stories high, they will be able to form some idea of the immensity of the projected pile. Dr Valentin remarks, that a general opinion prevails that, if the edifice is ever completed, it will, on account of its magnitude, and he might we think have added, of the defective plan on which it has been erected, be subject to all the inconveniences resulting from deficient circulation of air, and an excess of dampness. Indeed, the Albergo, owing to its situation, at a short distance from the foot of the hill of Capo di Monti, by which it is completely overlooked, experiences, even in its present unfinished state, a greater degree of the latter defect than was originally contemplated; a circumstance to which some have attributed the prevalence of opthalmia in this institution.

As the inscription placed over the portico, *Regium totius*

Regni pauperum Hospitium, plainly indicates the institution we are now describing was intended by its royal founder as a receptacle for the poor of the kingdom generally—the aged people, the crippled, orphans, and pauper children. In conformity with the regulations of the establishment, no individual is admitted before he has attained the seventh year of his age. The boys are, in general, brought up for military service, and consequently trained to arms. They are taught reading, writing, and the first rudiments of arithmetic. But their time is not exclusively engrossed by these occupations; on the contrary, they are instructed in various useful mechanical arts and trades; and such among them as distinguish themselves in these avocations are exempted from military service. Nevertheless even these continue, during their residence in the establishment, to perform the military exercise with the rest of their comrades. Some are taught music and drawing, and a certain number are sent to the lectures and hospitals, for the purpose of studying surgery; others are sent out to work at different trades in the city. They are not allowed, however, to walk in the streets unaecompanied by a prefect. A number of the boys are sent to this establishment from the Annunziata; while others, as Mr Carter informs us, are sent by the police, as a sort of penitentiary for the punishment of minor offences. As regards this circumstance, we can neither confirm nor disprove it, not having heard a word on the subject when at Naples. The girls remain in the house until they find a situation approved of by the administrators. In case they get married, they receive a dower of thirty ducats. Like the women admitted into the establishment, they are employed at sewing, spinning, weaving, and also at mantua-making, &c. A large number of females (nearly three hundred), with an equal number of boys, are occupied in a coral manufactory.

In 1828 the population of the Albergo amounted to about two thousand eight hundred individuals of both sexes; the number of the males exceeding by far that of the females. It is estimated that the building, when completed, will be sufficiently spacious to accommodate ten thousand people. The deaf and dumb who, as we have already stated, were originally placed in the *Ospizio di SS. Guiseppe i Lucina*, have been recently trans-

ferred to the *Albergo dei Poveri*, where they form a separate class, and receive proper instruction. In 1828 their number did not exceed twenty-five.

The establishment, throughout, is remarkable for the degree of neatness and cleanliness with which it is kept. The whole of the interior is painted of a brick colour. The children and other inmates sleep each in a separate and comfortable bed, (the colour of which is the same as that of the walls,) in dormitories sufficiently large to accommodate sixty or eighty. These dormitories, in the present state of the building, are well aired by means of large windows, and communicate freely with each other. The inmates commence their daily labours, consisting as we have seen in all kinds of trades and some manufactures, at five o'clock in the morning. At eleven they take breakfast, and at five they dine. They are well fed—each individual being allowed sixteen ounces of bread daily, soup at each meal, and a quarter of a bottle of wine. To this four ounces of meat are added on Thursdays and Sundays; on the latter day, also, a maccaroni is substituted for the soup.

Corporeal punishment is seldom, if ever, inflicted. The amusements of the inmates are not neglected. Among other means provided for this purpose there is, in one of the large halls on the first floor, a stage with all its appurtenances, on which the people occasionally perform comedies, operas, and even execute ballets. These sources of recreation appear at Naples to be rational and requisite; and we have no doubt that any one who, unbiassed by prejudice, reflects on the nature of Neapolitan character, will concur in this view of the subject. Like the people of the south of Europe generally, the Neapolitans are instinctively fond of theatrical performances, and would probably fall into a state of despondency and melancholy were they entirely deprived of them. They all require the active stimulus of public exhibitions—and life, without these, would seem to them monotonous, and not worth preserving.

It is right to mention in this place, that one-third of the profits of the industry of the inmates goes to themselves, and the remainder to the support of the institution—the revenues of which amount, as Mr Carter informs us, to two hundred

and fifty thousand dollars, of which the government contributes forty thousand dollars.

The next establishment we are to notice, is the Asylum for Invalid Soldiers. The building appropriated to it was originally a convent, built for and occupied by the order of Carthusians. It is situated in one of the most elevated spots about Naples, immediately under the castle of St Elmo, and commands probably one of the most extensive and splendid prospects in the world.

The establishment contains upwards of six hundred invalids, nearly one third of whom have become blind in consequence of ophthalmia. They are all well fed and clothed, and tolerably lodged. The courts are spacious, and one of them is remarkable for the neatness and even elegance of the arcades by which it is surrounded, and into which the lodging rooms of the monks formerly opened.

We are next, in order to complete our remarks on the hospitals of Naples, to offer a sketch of the Insane Asylum. This institution, of which so many contradictory accounts have been circulated, is the only public one in the whole kingdom appropriated to the accommodation of lunatic patients. It was established in the year 1813, the insane, anteriorly to that period, (and in conformity to the custom prevailing in former times throughout Europe of treating these kinds of disease in the general hospitals for the sick) were secured in a separate part of the Hospital of the Incurables. Here, however, these unfortunate individuals were imperfectly attended to, and wretchedly accommodated; from which we may conclude that the idea of separating them from the other classes of the sick and removing them to a distinct establishment may be regarded as a very happy one. At its origin the asylum was placed under the direction of the Chevalier Abbe Giovanni Maria Linguiti, whose claims to that important situation have not as yet been very satisfactorily made out. Be this, however, as it may, Linguiti gradually usurped all the functions of the medical attendants of the house, pluming himself, and finally succeeding in persuading the government, as well as the public in general, that he had devised a plan for the treatment of the various forms of mental alienation, far superior to any heretofore

practised. Such indeed was the high renown which the establishment and its priestly director attained, that several of the sovereigns of Italy, the Duke of Modena, the Duchesses of Parma, of Lucca, &c. defrayed the expenses of young physicians sent by them to Naples, to observe closely a method so highly extolled, with the view of introducing it, if possible, into their own country. At present the reputation of this establishment has, for reasons we shall presently specify, considerably diminished; and we very much doubt whether any one would now think of going to Naples with the hope of learning the most proper method of managing and curing insanity.

The asylum which forms the subject of the present sketch, is situated at the distance of about seven miles from Naples, and in the immediate vicinity of *Aversa*—the *Nuova Atella* of the Normans, by whom it was founded. By those who are well acquainted with the topography of the country, the selection of Aversa for the location of an asylum of this kind will be regarded as judicious; since the town, which boasts of a population of fifteen thousand inhabitants, lies in the midst of a most enchanting country, and combines all those physical advantages which can be derived from geographical position. The establishment at Aversa is divided into three distinct parts. The first is situated within a very short distance of the town, in an old convent, formerly belonging to the order of the Reformed Franciscans. It is called *La Maddalena*, and was baptized, at the suggestion of Linguiti, *Collegio Massimo*, from which we may presume he was a Jesuit. In this house are received individuals of the male sex affected with the different forms of lunacy, uncomplicated, however, with other nervous complaints. A second house, situated at the distance of a mile from the former, is opened for the accommodation of those who, in addition to mental derangement, are affected with epilepsy; and lastly, in a third house, also formerly a convent called *Montevergine*, and situated about two miles from the first, are placed all the female patients. The Maddalena being the only one of these establishments to which visitors are admitted, and of which an account has been published, the remarks that are to follow will not apply, unless otherwise specified, to the others.

The house is two stories high, besides an attic, and completely encloses an open space, which is divided into two courts by a transverse building. The first court is surrounded by arcades, and is ornamented with paintings, &c. It contains two wells, the openings of which are secured by means of iron railings or lattice work. In the second court is found a circular basin, containing, as M. Valentin has well remarked, a small quantity of stagnant water. This basin is surrounded by stone benches, and shaded by myrtles and willows. In the same court is found a column resting on some artificial ruins, and supporting the bust of Tasso. On one side of the house are placed two gardens, the one for the cultivation of vegetables, the other for that of flowers. The latter is made use of also as a pleasure ground for the inmates. In the lower story of the house are found the eating rooms, the kitchens, the theatre, the printing office, the stores, &c.; while in the upper story and attics are placed the hall, or concert room, the billiard-room, the library, and the dormitories. We may state, by the way, that strangers who visit this establishment are struck with the number of busts it contains, and the profusion of inscriptions scattered throughout every corner of it. Among the former are found those of Socrates, Esculapius, Minerva, Erasmus, Apollo, Mirth, Euterpia, &c. Of the latter, it will only be necessary to mention a few; thus, we find on the arch of the front steps, the following words: *Stultorum infinitus est numerus.* Over the door of the dark room used as a means of repression, is written, *Preservativo ad ogni stimolo sull' Eccitabilità cerebrale.* Over the door of the theatre, *Grand sala degli spettacoli.* Over a few musical instruments is written, *Remedi per le malattie dell' anima.* Over the door of the billiard-room will be found, *Sala del bigliardo, e stanza delle distrazioni.* In another place the word *Convalescenza* is inscribed in large letters, and under it the following extract from Ovid: *Quæ nunc ratio est impetus ante fuit.* Over the door of the library we find the following from Horace's Epistles: *Sunt certa piacula, quæ ter pure lecto poterunt recreare libello,* and in another part of the house is the following: *Combien de curieux empressés à me voir pourront en me voyant se passer de miroir.* These are only a few of the inscriptions to be found in this establishment; but they will be

sufficient to give an idea of the efforts made by the director to throw dust in the eyes of the public.

To return to our subject. There is every convenience for bathing; for cold and warm baths; for the surprise baths; for douches of all sorts, &c. The dormitories are small, and appeared to us to be too crowded with beds. In some of the rooms the bedsteads are of iron, and the bedding and covers tolerably good and neat. In other rooms, on the contrary, the beds are placed, some on the floor, others on boards elevated a few inches above the floor, and supported at one end on a movable foot, at the other in a hole cut in the wall. Here the bedding and covers are in a most wretched state. The first of the rooms are occupied by the pay patients, the others by the paupers. The maniacs of the former class, when unmanageable by common means, are shut up in a room capable of containing about eight beds, and secured by means of two straps, on a mattrass placed in a bedstead made like a box. This mattrass has, in the centre, a hole so arranged as to allow passage to the excrements of the individual. In other instances the same class of patients are placed and secured on mattrasses on the floor. When the paroxysm has subsided, or, in cases in which the disease assumes a continued form, when it is mitigated, the patients are removed to the other wards. As regards the room for pauper maniacs, we shall have occasion to say a few words presently.

Exteriorly the house presents a very strange and grotesque appearance, and is much more ornamented than the generality of public establishments of the sort we have seen any where. In order to convey an idea of this, it will be sufficient to state that the large windows which look upon the roads are, like every other, and, as they should be, grated; but instead of the common iron bars so generally in use for that purpose, each is furnished with a grating so fashioned as to represent a flower pot with the flowers either gilt or painted. We have heard some of the *employés* of the house remark, that these ornamented gratings were intended to remove from the inmates the idea of restraint and coercion so naturally conveyed by the sight of bars, and to offer to their view something agreeable. The reply to this, however, is, that these flower pots and gilded flowers are seen only from the outside, whereas

the patients, for whose benefit they are said to be intended, are, or at least ought to be, in the interior of the house and courts, where all the beauty of the view is for the most part unappreciable.

It is universally admitted by those who have visited this establishment, that it is far from being kept with great care, and particularly with due attention to cleanliness; and yet the keepers and domestics have plenty of time for showing off to advantage before strangers and visitors; for these latter are only admitted on particular days, and cannot, in consequence, take the former while off their guard. Nor have we found that the patients themselves, even those who are tranquil and orderly, and whose means would allow of it, are kept as nice and clean in their dress and person as could be desired.

Insane pauper patients are sent to this establishment from all parts of the kingdom, and maintained there at the public expense. But it is not exclusively appropriated to this class of individuals; for such among the upper classes as are affected with insanity are admitted, on paying a monthly stipend for board and lodging. In this respect, therefore, the institution may be compared to the *maisons de santé* of France and some parts of Italy, and to the private mad-houses of England. The pay patients are divided into two principal classes, according to the price of board allowed for them; each class eating separately and being differently fed. The individuals of one of those classes, for example, pay six ducats a month, and for this sum are furnished at dinner with three dishes, including maccaroni. Those of the other class pay twelve ducats, and have four dishes. The paupers have only two. They are all provided with a sufficiency of wine. They all make three meals. The breakfast consists uniformly of only four ounces of bread; the only difference being, that the pay patients have white and the paupers brown bread. The supper of the former consists of bread, (nine ounces), one dish, salad and wine. That of the paupers, of bread (eight and a half ounces), wine, and generally of soup made of semoula. The preceding is the regimen of melancholics and idiots, agreeably to the fortieth article of the regulations. Individuals of each class of the disease are fed somewhat differently. Maniacs, for exam-

ple, are not allowed meat, but only vegetable soup; they have also a smaller quantity of bread. The epileptics, on the days of the paroxysm, have the diet of maniacs; when calm, they are fed like the melancholics and idiots. Convalescents have the same diet as the latter. The sick are fed in the manner the physicians prescribe. Wine is not allowed to maniacs and epileptics.

A few patients pay more than twelve ducats a month,—as much indeed as sixty ducats, and are treated accordingly. But these are very few in number. We witnessed, on one occasion, the dinner of the inmates, and were much pleased with the manner in which it was conducted. The preparations for the repast were announced by a band of military music, consisting partly of regular musicians, hired for that purpose, and partly of the patients of the house, which marched in various directions through the corridors, the arcades, the courts, &c. Previous to this all the inmates, who were able, had attended high mass in a chapel attached to the institution. During the ceremony there was a grand display of music, performed principally by the insane of the house. At dinner the greatest decorum was observed; the patients were remarkably silent, and, in general, ate with considerable appetite. The tables for the different classes of patients were neatly laid, and the materials placed upon them were well prepared. One or two of the administrators always attend on those occasions, in order to superintend the service and insure proper order. In summer all the patients are sent to bed after dinner, for two hours, in order to take their *siesta*. It is necessary to remark, in this place, that all we have thus detailed occurred on a Sunday, when there were many visitors in the house. Whether the same decorum, order and neatness are observed during dinner *every* day, is a point we cannot pretend to decide. The inmates who pay either full or half board, (twelve or six ducats), are not dressed in an uniform manner, but according to their respective ranks in society. The others, on the contrary, receive from the establishment two suits of clothes, one for cold, the other for warm weather, consisting, in common, of uniforms of blue and white, resembling somewhat that of the military. The clothes are, however, kept in the general

wardrobe of the hospital, and are only made use of on grand festivals, or when the establishment is honoured with the visit of some distinguished personage.

The chevalier Linguiti died some years ago, and when we visited the establishment we learnt that it was placed, *pro tempore*, under the charge of an administrative commission. It was said at the time, that the intention of the government was to appoint soon a medical director. Tommasini remarks, indeed, that when he was there, the direction was entrusted to the first assistant physician, Dr Cattaneo, to whom he pays a flattering compliment for the zeal and activity he displayed in the performance of his duties, as well as for his talents and the mildness of his disposition—both of which are so requisite in the individual on whom devolves the responsible charge of treating and governing the insane. We suspect, however, that Dr Cattaneo acted merely as the superintendent of the Maddalena, under the control of the administrative commission, since in the *compte rendu* of the house, published about the time Tommasini was there, he is mentioned simply as assistant physician, and not as director.

The method of treatment adopted at the hospital we are now noticing, consists more of moral than of physical means; in other words, active remedial agents are seldom employed for the removal of mental disorders—more seldom at least than in other hospitals of the kind we have visited; and the disease is left pretty much to itself, or combated by means calculated to act on the *moral* of the patient. When, however, during the course of the malady for which the patients have been admitted, there supervene symptoms indicative of active disease of the brain or other organs, bleeding and antiphlogistics generally are resorted to. But as these means would in all probability have been employed for the removal of the same symptoms, were the patient unaffected with insanity, we are fully justified in saying, that at Aversa the mental derangement of the inmates is only combated by means which are supposed to act solely on the moral and intellectual being. Linguiti had suppressed the use of corporeal chastisement and chains, formerly too commonly resorted to in the lunatic asylums of Italy. For the repression of violent maniacs

he made use of a straight jacket, resembling, in many respects, the one employed in France. He adopted also other means for the same object—such as the horizontal position in bed, already noticed. Another means of repression proposed by him, consisted in placing and securing the patient vertically against a wall. This was to be effected in the following manner: the patient's arms being secured by a straight jacket, and the flexion of the fingers prevented by hard leather gloves, he was fastened to the wall by means of a semicircular piece of iron, covered with soft leather, and passing over the chest; the legs being at the same time secured in a board provided with holes for that purpose. The patient was made to remain several hours in this position. Dr Valentin informs us, however, that those two means of repression were only intended for show, and that Dr Ramolini, who remained seven months in the hospital, whither he had been sent by the Parmesian government, assured him, that no foreign physicians had ever seen them resorted to. The douches and baths by surprise are often employed in cases of mania, and, it is said, with effect. The rotatory machine, on the contrary, is not held in much estimation. As may have been already inferred from the inscription placed over the musical instruments in the concert-room, great reliance is placed on music, as a remedial agent, in the management of the inmates of Aversa. In consequence of this, there is a teacher of that art attached to the establishment, under whom those who manifest a taste for it and a disposition to learn are placed for instruction. In one of the halls concerts are given by a full band, the members of which consist principally of lunatics. We were gratified to hear an inmate of the establishment, on one occasion, sing with much precision and taste to the accompaniment of the piano-forte, which was entrusted to another patient—an ecclesiastic, who acquitted himself with much dexterity and talent. There is another source of amusement, not commonly allowed in lunatic asylums, with which the inmates of Aversa are provided: we allude to theatrical representations, in which some of the patients are made to assume the part of performers, others of spectators. For this purpose a stage is provided, as already mentioned, in one

of the lower rooms. But we doubt whether these representations are often resorted to, for when we were there, the stage and all its appurtenances appeared much out of repair. On some occasions a few of the lunatics are sent to the theatres of Naples: this, however, is always at their own expense. Some of the patients are made, for the purposes of exercise and occupation, to work in the garden, to cut and saw wood, draw water, &c.; while, during the hours of recreation, they play at billiards and other games, and occupy their minds in various ways.

Dr Otto, of Denmark, who has written an instructive account of his medical travels on the continent, has expressed an opinion relative to the means employed at the asylum of Aversa for the moral treatment of the insane, which, as it accord perfectly with that of other medical travellers, as well as with the one we ourselves formed on the same subject, we shall present in his own words. "The object constantly kept in view is the complete occupation of the inmates; but the means made use of to effect this do not appear to be wisely chosen. That they should be employed in cutting wood and drawing water; that they should exercise their bodily strength in large open courts; that there should be a printing office, where some set the types while others print; that they should be exercised in translating French into Italian; that some should play at billiards, others be exercised in singing and music, is all useful and to the purpose. But to these are added so many absurd, childish, and even hurtful attempts at occupation, that there is much need of a reform. Thus, for example, in all the wards the walls are bedaubed and disfigured with motley paintings of every description, good and bad. In a large ward, where the lessons in music are given, the walls are painted from top to bottom with caricatures. The amusement of shooting in the court, at the wooden figure of a man, is one which, it is hardly necessary to say, may be attended with the most dangerous consequences*."

But the plan of treatment devised, and to a certain extent pursued by the Chevalier Linguiti, notwithstanding the pains that were taken to extend its fame, and amuse the public with

* Johnston on Charities in France, note p. 440.

the belief of its ingenuity and usefulness, has been accused, by very competent judges, of being calculated to deceive the public, rather than to contribute to the object for which it was intended; and there are not wanting some, who have gone so far as to pronounce it a compound of tricks and deceptions, unworthy of the age in which we live, and of the country in which it was practised. We deem it unnecessary to dwell minutely on this subject; but we cannot omit noticing the remarks of a writer, who appears to have contributed more effectually than any other with whom we are acquainted, to open the eyes of the medical public on the subject of these deceptions. We allude to Dr Gualandi, Professor of Pathology and Legal Medicine in the University of Bologna, and Medical Director of the Asylum for the Insane (*Spedale di S. Orsola*) in the same city. Dr Gualandi having been employed to accompany a patient of rank and fortune, who was sent, in 1822, to Aversa, was enabled, during the time he remained there, to inquire minutely into all the details of the administration of, and of the method of treatment employed in, that establishment. The result of his observations were published by him in the year 1823, under the title of *Osservazioni sopra il celebre Stabilimento d'Aversa nel Regno di Napoli, &c.* (1 vol. 8vo, pp. 230.) From a copy of this work, now lying before us, we shall translate a few of the charges brought against the establishment in question. Dr G. remarks, that many of the rooms were, at the time he visited the asylum, very obscure and imperfectly ventilated—that many of the straw beds were filthy and rotten, and emitted, in consequence, an extremely nauseous odour;—that in other rooms the floors and walls were covered with dirt; the straw beds black; the mattresses of bad quality, and often unprovided with sheets;—that the patients were not kept clean, and in some instances were disgustingly dirty;—that proper provisions were not made in the rooms for receiving, at night, the excrements of the patients—the poor having only a wooden vessel placed in the middle of the room, and carried out in the morning—an arrangement from which resulted a considerable stench;—and that only a few of the rooms for pay patients were provided with close-stools. Dr G. further al-

leges, as objections against the establishment, that the patients were not divided into classes,—the director not wishing to establish any distinction between them, and even affirming, that the association together of individuals afflicted with the different forms of insanity contributed, in some measure, to the moral treatment of the disease ;—that the only distinction observed consisted in this, that the pay patients occupied the least objectionable rooms, the furniture of which being procured at their own expense, was of better quality and cleaner in appearance than that of the other rooms ;—that even individuals of the upper classes could not, except under very rare circumstances, obtain a private apartment ;—that stubbornness and disobedience to the orders of the officers of the house and the attendants, were punished by imprisonment, which was prolonged, in some cases, for several days ;—that the greater number of the patients were left almost entirely to themselves, some walking about from morning to night in the courts and passages, while others passed their time in perfect idleness ;—that the more calm among the patients were allowed only on Sundays to remain in the garden during two hours after dinner, to enjoy the pleasure of dancing the Tarantella ;—that at night no lights were allowed in the dormitories or passages, so that complete darkness prevailed often, to the great confusion of such of the inmates who were under the necessity of rising after dark;—that in winter no stoves at which the patients could warm themselves were allowed in any part of the house, and that the only substitutes for them consisted in three coal-pans, or braziers, placed in the halls, on the ground floor, near the refectories. These Dr G. regards as quite insufficient; but adds, that, fortunately, the mildness of the climate obviates in some measure the inconveniences that might result from this circumstance. The same author, after speaking favourably of the introduction of music in the treatment of insanity at Aversa, remarks that the billiard board, on the importance of which much has been said, was never occupied by more than two or three chronic patients, and that too only when strangers visited the establishment; and that an equal number only were occupied in the printing shop, in aiding a regular workman, paid for the purpose of attending to the business.

Dr Gualandi further remarks, that the Abbé Linguiti was in the habit of telling all the visitors, and of publishing in the newspapers, that the moral treatment in the establishment entrusted to his direction consisted principally of the following means: 1, occupation; 2, distraction; 3, repression; and 4, of the peculiar treatment necessary for each case. To this, however, he replies, that from what he has said, it will be immediately perceived that this excellent plan was not put into operation. He even maintains that, properly speaking, there was no regular plan of treatment pursued; and inveighs bitterly against the two methods of repression we have noticed in a preceding page, pronouncing them to be severe and barbarous. In addition to this, Dr G. remarks that the douches and baths were administered in a very imperfect manner;—that the servants were too few in number and not judiciously selected;—that the physicians had not sufficient authority, that being almost exclusively vested in, or assumed by the director;—that no regular register was kept of the phenomena, progress, and results of the cases. He blames the director for allowing the indiscriminate association of the tranquil and turbulent patients. "How can we help expressing disapprobation," he observes, "at the fact, that in the most horrid place in the third story, in which the furious are imprisoned, they lie often on the floor during the night, and are exposed, in the day, naked, bound by straps, to the inclemencies of the weather, seated under a single roof, with a straw bed near them, no larger than the palm of the hand, and often rotten and full of vermin?" The care of these poor wretches is confided, Dr G. adds, to a stupid lunatic, who, placed in a room situated in front of the principal staircase, cannot, if he would, go up and be ready to administer to the wants of all the wretched beings collected in that ward. Hence their horrible sufferings, resulting from hunger or thirst, as manifested by their sinking from exhaustion, or by the most pitiful cries. In proof of this Dr Gualandi alludes to the case of a man named Dominico Romano, who, pressed by hunger, or at least in a moment of phrenzy, gouged out the eyes of one of his comrades, and ate off the ends of all his fingers. Dr Valentin states that Dr

Ramolini related the same anecdote to him, which, indeed, will be found described at full length in the acts of the royal tribunal of the *arrondissement* of Aversa.

Dr G. remarks, at the commencement of his third chapter, that it is impossible for a stranger to form a correct idea of this establishment, because, no sooner does he enter than a servant occupies his attention, by a description of the statues and inscriptions, by conducting him to the printing office, and by giving him a long dissertation on the utility and success of this and the other means employed. After this, he is conducted to the garden, which, he is told, is cultivated by the inmates. Then he is shown the fine staircase, the church, the billiard room, &c. He is gratified with some music, and is finally conducted out, without being allowed to see any of the bedrooms. It is very plain, he adds, that an individual, who sees no more of the house than this, can form no opinion of the plan of treatment pursued, or of the manner of managing the patients. Even physicians who visit the establishment are not allowed to penetrate much deeper into the secrets of its administration or organization.

Such was the state of the celebrated asylum of Aversa at the time of Dr Gualandi's visit. From all we have been able to learn on the subject, and from what we have seen, we have not the least doubt of the correctness, at the time, of all the charges brought against the institution by that intelligent author, and that many of them could, with the strictest propriety, be adduced against it at a much later period. Yet, it is but justice to state, that in 1826, a new set of regulations were framed, by order of the government, for the administration of the house, and that when we visited the latter, in company with the principal physician, Dr Vulpes, who was kind enough to lead us through the whole establishment, we had reason to be pleased with its general appearance; at least, more so than we had anticipated from Dr Valentin's and Dr G.'s remarks on the subject. This induces us to conclude that some ameliorations had been made in the arrangement of the house, and in the management of the patients, since Linguiti's death, and the period of Gualandi's and Valentin's visits. But, while allowing this, we must beg leave to state, that

much, very much, appeared to us to remain to be done, before the establishment could deserve the praise once bestowed upon it, or to be compared with other lunatic asylums in Europe or America. Tommasini, while allowing full credit to Linguiti, (who, whatever may be said respecting the defects of his administration, and his quackery, certainly displayed no ordinary share of ingenuity and even genius,) for some of the means he suggested in the management of the insane, remarks: "but whether he wanted the means,—whether the smallness of the place did not permit him to put into operation so vast a design; certain it is that the most important and difficult part of the undertaking,—the moral treatment and the sound education of the insane remained limited to good intentions." This we believe is exactly true, for we could never be made to attach much importance to many of the means suggested by the late director, and for which he has been highly extolled by his partisans.

During our residence at Naples, we learnt that the insane were soon to be transferred from the establishment of Aversa, to another and larger one situated near the entrance of the city, not far from the Royal Museum. The building selected for this purpose is sufficiently spacious to be divided into several compartments, suitable to the accommodation of *all* the patients,—the sexes being still kept apart from each other. It was formerly, like the Maddelena and Montevergne, a convent, and was undergoing, in 1828, the repairs necessary for placing it in a fit state for receiving its new inmates. Although great advantages will probably result from this change of location, in as much as the service of the house will be better conducted, and the whole establishment placed more immediately under the observation of the medical officers, and of the administrative commission, than it could possibly be at so great a distance from the city: yet, we are inclined to believe, that the open country and wholesome air of Aversa will often be regretted. Dr Vulpes informed us, that in the new establishment he would have the patients divided into different classes, according to the nature of the complaint, and would cause them to be placed separately; he nevertheless was of opinion, that some advantages might be derived, by allowing the gay and

noisy to associate with the melancholic—the cheerfulness and buoyancy of spirits of the former being likely to arouse the latter from their torpid state, and vice versa.

There are several medical men attached to this establishment—two ordinary or resident, and several assistant physicians, and one surgeon; one chief physician and one consulting physician. In 1827 the former were Messrs Cataneo, Federi and Saporito. The ordinary physicians were Messrs Basile and Perrone. The chief physician was Professor Vulpes, and the consulting physician Professor Ronchi, of both of whom we have already had occasion to speak, while on the subject of the medical schools of Naples. The duties of the resident physicians are, according to Dr Gualandi, to visit the establishment once or twice every day; to keep watch, or in place of it to pay some one belonging to the house to perform that service in their stead; to accompany the strangers who visit the institution, and give them the various explanations of those objects that are destined to inspire the idea of the marvellous, and serve to produce illusions; finally, to make reports to the director on the state of the patients, in order that, while at Naples, he may be apprised of all that occurs in the establishment, and speak to every one with perfect knowledge of the state of things there. The chief physician visits the establishment once or twice a week, or oftener if his services are required, and receives a salary of forty-five ducats a month. As regards the duties of the consulting physician, we shall have occasion to speak of them presently.

In 1826 a set of regulations, prepared by order of, and approved by his majesty, was published under the title of *Regolamento per la Direzione Sanitaria Delle Reali Case de' Matti nel Regno di Napoli.* The first chapter of this volume, from which we are now to glean a few facts, has reference to the formalities requisite before any individual can be received into the hospital of Aversa, as well as to those to be observed immediately after his admission. It provides, that before a lunatic is sent to Aversa, he must be shut up in a house of observation at Naples, where the physician and surgeon of the latter establishment, in conjunction with the consulting and first physician of the former, are obliged to examine whether his disease be real or not,—it sometimes being simulated in

order to escape the punishment due for a crime, or to avoid military conscription, while at other times it may be imputed to an individual from motives of interest, &c. In the case of pay patients, these observations are made in the establishment itself, where they are immediately sent,—the authorization of the minister of the interior to that effect having, however, been previously obtained. In order to effect these important observations, holes are bored in the walls of the room in such a manner as to allow the physicians to observe the patient without being seen by him. As soon as the individual is ascertained to be insane, he is admitted into the establishment; the poor patients being sent thither provided with a certificate signed by the four physicians. The name of the individual is immediately entered on a register, together with his surname, country, condition, the date of his admission, and the character of the disease. Independently of this register there are as many others as there are classes of insane patients, in which are entered the name, surname, state, temperament, condition of the patient, as well as the mode of attack, the progress and causes of the disease, the treatment pursued, the antecedent maladies, &c. These notices are forwarded to the intendant of the province, or to the prefect of police, who obliges the physician of the commune whence the patient has been sent, to transmit all the requisite information on those points, agreeably to a form prepared for the purpose. From these registers is derived the knowledge of the number of insane of the different classes in the establishment.

Immediately after the admission of the patients, they are washed in a tepid and aromatic bath, and next dressed in the manner already mentioned. This done, they are conducted into a room of observation. The second regulation relates to the patients after their reception,—*Osservazioni su i folli ricevuti.* According to it they are to remain in the rooms of observation for at least eight days, during which time they are to be examined by the physicians, and particularly by the assistants, who, however, must avoid being perceived by them. The first prefect and other *employés* inform the physicians of all that is done by the patients thus observed. These observations have for their object to ascertain the particular phenomena presented by each patient, and to determine the class to which he belongs; to

ascertain with precision if the paroxysms take place before or after dinner, in order to know if they are produced by want of food or repletion; if they occur in the morning or at noon, in the evening or at night; if when the patient is alone or in company, &c.

All the information on these points being obtained, the assistant physician, charged with the keeping of the journal of the house, enters the name of the individual in the list of one of the four classes of patients: 1st, Maniacs; 2d, Melancholics; 3d, Idiots; 4th, Epileptics with delirium. The principal physician examines this classification in virtue of the power of inspection vested in him, and is, if possible, to visit the insane in such a manner that one of his visits, two of which occur during each week, shall take place at one hour, and the other at a different one;—sometimes on the same, and at others on different days. He is even sometimes obliged to sleep in the institution, in order to pay a nightly visit.

The classification being made, the ordinary and assistant physicians hand over the patients to the proper prefect, in order that they may be conducted to and lodged in the rooms appropriated to the class of the disease to which they belong, so far at least as the present state of the house will permit.

It may be proper to state here, that in order to be received at Aversa, it is first necessary to hand in a petition to the director, if the individual is able to pay for his board. When, on the contrary, it is desired that he should be admitted as a poor patient, a privilege granted only to Neapolitans, it is necessary to apply to the minister of the interior, who judges of the validity of the claims of the individual to the charity, and who, in case he thinks them sufficient, issues an order for admission. The first class of patients pay at least one month's board in advance, and must furnish a security for the payment of the succeeding months*.

The code of regulations to which we have alluded, specifies the duties of the physicians. From the third chapter we learn, that the consulting physician having only the superintendence of the sanitary service, the ordinary and assistant physicians are to propose the method of cure suitable for each patient; that from this the consulting physician, influenced by the observa-

* Gualandi, op. cit. p. 36.

tions of the first physician, establishes the plan of cure; that the assistant physicians must keep a register, in which is to be entered all that relates to each case; that the first physician, at his visits, is to examine these registers of daily observations, and prescribe all that he deems necessary for the cure; that the ordinary and assistant physicians are to make their questions and propose their doubts to the former, to be transmitted with his observations to the consulting physician; that the latter communicates, through the medium of the first, to the ordinary and assistant physicians, all the modifications he deems necessary to make in the plan of cure; finally, that in his visits the first physician is followed by the ordinary and assistant physicians, by the different prefects, as well as by the ordinary and assistant surgeons. The same regulations refer also to the method of cure,—leaving much, however, to the discretion of the physicians. They abolish, definitively, the use of chains; direct the maniacs to be placed in a dark room; authorize the use of electricity and galvanism in cases of melancholy,—recommending, at the same time, the greatest caution in the use of these means; prescribe the regimen for each class of patients; the articles of dress; the hours of meals and of sleep; the modes of exercise and movements,—walking, dancing, music, reading, writing, recitation, painting, sculpture, &c.; the whole being left to the direction of the consulting physician; state that the amusements of riding and of the theatre are at the charge of the patient; recommend conversation with family and friends; direct mass to be heard at stated times, and that the patients should be made to attend to the other acts of religion whenever they are in a fit state to do so; direct that the convalescents should be placed in a convenient room for observation; that the sick be sent to an infirmary where the phenomena presented shall be carefully noted; and finally, order that in case of death, an examination of the body shall be made.

When we visited Naples the ward of observation was situated in the hospital of S. Francesco. No selection could, we believe, have been more injudicious than that of this establishment for the location of such a ward; since, destined as it is for the reception of sick prisoners, and having the appearance of a jail both externally and internally, it must convey to the

unhappy sufferer who is conducted there, the most gloomy and desolating ideas,—those of forced seclusion. Independently of this circumstance, which it may be said cannot affect the maniac, the noise in such an establishment is distressingly great, and must inevitably tend to keep the patient, if maniacal, in a state of continual excitement. We firmly believe, that had we been forced to reside there a week, we would have been, at the end of that time, a fit subject for Aversa. We were happy, however, to hear at the time from Dr Vulpes, in company with whom we visited the place, that the ward of observation would in all probability be transferred to some more appropriate house.

Dr Lostritto, who served in 1825 as one of the ordinary physicians at Aversa, has compiled from the registers kept in that establishment, statistical observations, which he forwarded to Dr Esquirol of Paris, with a request to have them published. This Dr E. has done in a note inserted in the twelfth volume of the "*Archives Générales de Médecine*," from which we borrow the following facts. Dr E. remarks that in fourteen tabular views forwarded to him, Dr Lostritto presents the number of patients admitted, every year and every month, during a period of ten years,—from the 1st of January 1814, to the 31st of December 1823; as well as a statement of the age, sex, and temperament of the persons admitted,—of the physical and moral causes of the disease in each case,—the cures, relapses and deaths, &c. It appears from his statements, that the number of admissions in the period already mentioned amounted to 1725. The average number for each year was, therefore, 172.5. In the years 1822 and 1823 it was greater than it had been during the preceding years. In 1814 it did not exceed 151, while in 1823 it was no less than 212. Dr Esquirol adds, that this increase, which was still greater in 1825 and 1826, was doubtless due to the political troubles which agitated the kingdom of Naples at that period. The number of admissions is greater during the months of May, June, July and August; much smaller in those of winter. The same occurs at Paris and London. The establishment of Aversa, receiving patients from all parts of the kingdom, and the number of admissions into it, compared with the population, being smaller than is found to occur in France and England, it would follow that the various forms of insanity are less

frequent there than they are in the latter. Such indeed is found to be the case, not in respect to Naples only, but also to the rest of Italy, to Spain, and to the north of Europe. At Naples, insanity attacks most frequently individuals between the twentieth and thirtieth years of age,—the number increasing as we approach the latter period, at which the disease appears much more frequently in both sexes. It diminishes very abruptly after the fortieth year, while in France it appears more frequently among women between fifty and sixty than among men. At Naples the disease is much more common among males than females. The same occurs in the rest of Italy and in Spain. At Aversa, during the period already specified, out of the 1725 cases admitted, 1221 were males and 504 females; which gives a proportion of five of the former to two of the latter. From a document in our possession we find that the number of the sexes, during each of the ten years, was as follows:

Year.	Males.	Females.	Year.	Males.	Females.
1814	101	50	1819	133	41
1815	95	45	1820	116	52
1816	133	49	1821	132	45
1817	88	56	1822	148	46
1818	118	65	1823	157	55

Dr Esquirol remarks, that in the southern parts of France, the number of male patients is nearly equal to that of females; while in the northern portions of the same country, the number of females is greater than that of males. It is not to be imagined, however, that this difference is to be attributed to the difference of temperature, since it is found, that in Russia, the number of male exceeds that of female patients by one-fifth.

At Naples the bilious temperament predisposes, more than any other, to insanity. Out of 1299 patients whose mode of life could be ascertained, 317, or one in four, lived in the country. Exposure to the sun, Dr E. remarks, may perhaps have contributed to this effect; yet, in the enumeration of the physical causes of the diseases, insolation is only mentioned four times. As in France and England, moral causes are, at Naples, oftener productive of insanity than those of a physical nature. Dr Lostritto only mentions twenty cases of hereditary insanity, eighteen among males, and two among females. This number of heredi-

tary cases is so much smaller than what is observed in France, England and Germany, that Dr Esquirol suspects some error has crept into the observation of the cases generally. At Naples it is found that insanity is frequently the effect of malignant, cerebral, and particularly of malignant intermittent fevers. Love is marked among the moral causes of the disease in about one-twelfth of the cases. Vanity, pride and ambition have also often contributed to its production. Of all the forms of the complaint monomania is found to be the most common. Out of 1430 cases, 843 were monomaniacs. Of these 425 were monomaniacs with exaltation and the predominance of an expansive passion. In 418, the disease assumed the form of *lypemania*, in which the patient is afflicted with a depressing passion. Cases of *mania* are more frequently met with in May and June; less so in July and August. Monomanias appear in June,—continue to do so in July and August, but are mostly prevalent in September and October. Of all the forms of insanity, mania is found to be the most easily cured. The cures are in the proportion of three to ten among men, and five to seventeen among females. This proportion is smaller than in France and England; in the former of which it is calculated, that under the most unfavourable circumstances, the proportion is of two to five, and under the most favourable, one to two. The cures are numerous in September, and continue so in October and November. They are most numerous in April. The same results are obtained in France. The number of cures was much greater in 1819 and 1820 than it had been during the preceding years, or has been since. Dr Esquirol remarks, that the same circumstances were noticed in France in 1814, 1815, 1816, and attributes it, in both countries, to the number of cases of accidental insanity, occasioned by the political events which occurred there in those years. Out of 578 cures, obtained during ten years, there occurred ninety-two relapses, seventy-three males and nineteen females, or about one in six. In France relapses are not so frequent, occurring in the proportion of only one case out of five among men, and in only one in ten among females. This gives an average of one in seven and a half. As at Paris, the number of relapses has been found at Aversa to be greater among males than among females.

The mortality is found, in the same establishment, nearly equal among males and females; being in the proportion of about one-fourth for both sexes. In France the proportion of deaths is much smaller, being only one-ninth among the males and one-sixteenth among the females—or one-thirteenth for both sexes. As in France, the mortality at Aversa is found to be much greater during winter than in any other season. Thus, in November, December and January, 207 individuals have died, while during the remaining nine months only 529 deaths occurred. The mortality is smallest in May, June and July. The number of deaths was much greater in 1816, amounting to 116; whereas the average number for the ten years did not amount to more than 53. The cause of this difference is attributed to an epidemic of typhus fever, which did not spare the insane population of the house. Insanity alone does not kill. Few maniacs die, and apoplexy rarely occasions death in this disease. Several melancholics have died in consequence of refusing nourishment, some with the view of committing suicide; others again from the belief that they could not swallow. *Hydrophobia!* dry gangrene, exanthematic fevers are frequent causes of death at Aversa.

In his reports, Dr Lostritto does not present the results of the post mortem examinations, made at Aversa, during the ten years to which we have alluded. Dr Esquirol, after remarking that in the various insane asylums of France, more than one half of the insane patients who die are affected with paralysis; adds, "the physician in chief of the establishment of Aversa (Dr Vulpes) assures me, that very few paralytic cases are seen there, among males or females; although the population of the house amounts at present to 600 individuals. It would be interesting to know the cause of so striking a difference in the lesions of the power of movement among the insane patients of the two countries." We find, however, in a note communicated by Dr Lostritto to the editor of the *Osservatore Medico* of Naples, and inserted in the number of that journal for 1st of January 1827, that the author rectifies, in some measure, the information obtained by Esquirol from Dr Vulpes, affirming that although at Aversa complete paralysis is of rare occurrence, the variety of the disease which Esquirol notices, and which Bayle describes as *general*, and at the

same time *incomplete*, affecting first the tongue, and extending gradually to the muscular system generally, rendering locomotion uncertain and vacillating, and finally putting a stop to every species of movement, is often met with—the loss of sensibility being less intense than that of the power of motion.

From a series of statements published in 1827, in a work entitled *Giornale del Reale Stabilimento de' Folli in Aversa per l'anno* 1826, we learn that, on the 1st of January 1826, there existed in the three establishments for the insane, at or near Aversa, 644 patients, of whom 408 were males, and 246 females. The proportion of each class, in both sexes, was as follows:

Males.		*Females.*	
1. Mania, . . .	122	Mania, . . .	69
2. Melancholy, . .	163	Melancholy, . .	120
3. Idiocy, ...	87	Idiocy, . . .	33
4. With Epilepsy,	36	With Epilepsy, .	14
	408		236

TABULAR VIEW OF THE INSANE EXISTING AT AVERSA, JANUARY 1, 1826.

	Mania.		Melancholy.				Epilepsy with			
	Simple	Furious	True	Spurious	Furious	Idiotism.	Mania.	Melancholy.	Idiocy.	Total.
Males	106	16	127	25	11	87	22	4	10	408
Females	69			120		83		14		236

In the course of the year 1826, there were admitted

Males.		*Females.*	
Maniacs, . . .	49	Maniacs, . . .	23
Melancholics, .	79	Melancholics, .	31
Idiots, ...	17	Idiots, ...	8
With Epilepsy, .	11	With Epilepsy, .	1
	156		63
		Males,	156
		Total of Males and Females,	219

The admissions, by months, were as follows:

	Males.	*Females.*
January, ...	3	3
February, ...	10	4
March, ...	19	5
April, ...	21	7
May, ...	17	4
June, ...	10	9
July, ...	15	5
August, ...	22	10
September, . . .	5	4
October, ...	12	7
November, . . .	13	3
December, . . .	9	2
	156	63

Of these there were, among the males, forty-nine maniacs, of which thirteen were cases of relapses; seventy-nine melancholics,—eight were relapses; seventeen idiots,—four of relapses and eleven epileptics. Among the females there were twenty-three cases of mania,—twelve relapses; thirty-one cases of melancholia, seven relapses; eight of idiocy; one of insanity with epilepsy. The number of cases of relapses admitted among the males appears, therefore, to have been twenty-five out of one hundred and fifty-six; and among the females, nineteen out of sixty-three. From the same tables it results, that mania was more frequent in March (ten), in April (nine), in July (eight), but particularly in August (four-

teen). That melancholy was most frequent in May (ten), July (eleven), August (fourteen), October (thirteen), November (ten).

From what precedes, then, it appears, that the total number of lunatics treated at Aversa during the year 1826, amounted to 863, 644 of whom existed in the establishment on the 1st of January, and 219 entered in the course of the year. Of these there were discharged, cured,

Males.		*Females.*	
Mania, ...	32	Mania, ...	13
Melancholy, . .	56	Melancholy, . .	23
Idiocy, ...	6	Idiocy, ...	6
Epilepsy, . . .	2	Epilepsy, . . .	3
	96		45
		Males,	96
		Total cured,	141

There left, greatly improved,

Males.		*Females.*	
Mania, . . .	9	Mania, . . .	7
Melancholy, . .	11	Melancholy, . .	12
Idiocy, . . .	0	Idiocy, . . .	2
Epilepsy, . . .	1	Epilepsy, . . .	0
	21		21
		Males,	21
Total of those who left greatly improved,			42

There died during the year,

Males.		*Females.*	
Mania, ...	7	Mania, . . .	4
Melancholy, . .	20	Melancholy, . .	3
Idiocy, ...	3	Idiocy, ...	4
Epilepsy, . . .	3	Epilepsy, . . .	3
	33		14
		Males,	33
Total number of deaths,			47

The number of lunatics affected with disease in the course of the year amounted to one hundred and eighty-seven: of these one hundred and two were males, and eighty-five females. They may be arranged in the following order:

		Males.			*Females.*	
Febrile diseases, .	46	died	1	31	died	1
Apoplexy, ...	11	—	11	4	—	4
Tabes and marasmus,	17	—	14	10	—	3
Hemoptysis, . . .	2	—	1	3	—	2
Erysipelas, . . .	1	—	0	3	—	0
Dysentery, . . .	3	—	1	0	—	0
Diarrhea, . . .	1	—	0	1	—	0
Dyspepsia, . . .	2	—	0	0	—	0
Violent asthma, .	1	—	1	1	—	1
Ascites, ...	1	—	1	0	—	0
Pulmonia, ...	1	—	1	0	—	0
Hepatisis, . . .	1	—	0	0	—	0
Ophthalmia, . . .	2	—	0	0	—	0
Chronic convulsions,	2	—	0	0	—	0
Eruptive diseases, .	3	—	0	4	—	0
Enteritis, ...	1	—	1	0	—	0
Contusion on the head,	2	—	0	0	—	0
Colic, ...	2	—	0	1	—	0
Wounds, ...	2	—	0	3	—	0
White swellings, .	1	—	0	0	—	0
Moreover, one lunatic who died before reaching the establishment,	0	—	1	0	—	0
Luxations, ...	0	—	0	1	—	0
Ophthalmia, . . .	0	—	0	1	—	0
Anorexia, ...	0	—	0	1	—	0
Frost-bitten, . . .	0	—	0	21	—	2
	102		33	85		14

Among the males four were cured of their lunacy by the disease with which they were affected (one after fever, two after eruptive disease, and one after contusion on the head) and nine were greatly relieved (seven after fever, one after hemoptysis, and one after chronic convulsions). These nine

individuals were soon afterwards discharged cured. Among the females six were cured and five greatly relieved in the same manner. Of the former, three were cured after fever, two after erysipelas, and one after an eruptive disease. Of the latter all were relieved after an attack of fever. They all were soon after discharged cured. Six of the cases of marasmus, among the males, were occasioned by inanition, from a refusal to take nourishment. This statement of the establishment of Aversa gives results which agree in some points, but disagree in others, with those we have copied above. Thus, among the male patients, the cures were only as one to five and nine-tenths; amongst the females, as one to six and a half. The discharged relieved amounted, among the males, to one in about twenty-six, and among the females to a little more than one in twenty-four. The deaths among the males were as one to rather more than seventeen; and for the females as about one to twenty-one.

It will be seen, also, that of forty-seven deaths fifteen were from apoplexy; whereas M. Esquirol states this disease to be rarely a cause of dissolution among lunatics.

Having stated that of the 263 patients treated in the establishment of Aversa during the year 1826, there were discharged 141 cured and 42 greatly relieved, and that during the same period 47 had died, making an amount of 230; it results that on the 1st of January 1827, there remained in the house 633 patients; 414 males and 219 females. The following table will afford a view of the proportion of the various forms of the disease in each sex.

	Mania.		Melancholy.			Idiocy.	Epilepsy with			Convalescents.	Total.
	Simple	Furious	True	Spurious	Furious		Mania.	Melancholy	Idiocy.		
Males	92	21	116	29	11	94	23	5	13	10	414
Fem.	38	24	7	22	34	75	5	1	4		219

ART. II.—BROWN'S MEDICAL ESSAYS.

Medical Essays on Fever, Inflammation, Rheumatism, Diseases of the Heart, &c. &c. By JOSEPH BROWN, M.D. *of the Royal College of Physicians, of the Royal Medical Society of Edinburgh, and one of the Physicians of the Sunderland Infirmary.*

Human maladies are so exceedingly complex, and the human mind so variously constituted, that every practitioner of much experience and observation must have noticed new forms or modifications of disease, and must have drawn inferences, and instituted modes of practice, different from those before prevalent, and entitled at least to the attention of his brothers in the profession. A book, therefore, which professes to embody the experience and peculiar views of any respectable physician, should always be received as a favour conferred upon the public. Though its pretensions may not be first rate, nor every thing which it contains deemed worthy of adoption, or even of minute attention, still something may almost always be gathered from it, which the wisest practitioner may turn to his own profit or to that of his patients. Nor need we fear the unnecessary multiplication of such books: if possessed of extraordinary merit, they will deserve the place which they will retain on the shelves of our medical libraries; if furnished with but a small quantity of valuable matter amidst a mass of rubbish, they will undergo a careful scrutiny, and yielding what is really useful to the industry of compilers, will float down the current which has borne so many of their predecessors into oblivion. The book before us is certainly not one of those which will live for ever. It neither contains sufficient important original matter, nor possesses sufficient merit of style or arrangement, to entitle it to so high a distinction: but it is not without claims to favourable notice, and will furnish to the reader much that is interesting and something that is really valuable, both in fact and in opinion. The author appears to have had extensive opportunities of witnessing disease, and being of an observant turn of mind and independent mode of thinking, has not allowed these opportunities to pass without improvement. His attention, how-

ever, seems to have been especially directed to a few complaints; or if more diffusive, has not been followed, except in these instances, by such discoveries or reflections, as have been deemed by him worthy of communication to the public: for his work, though written in accordance with the principle that every experienced practitioner is possessed of knowledge which, as it may be useful, should be made known to others, is confined, with the exception of a few general remarks on inflammation, to the subjects of fever, rheumatism, diseases of the heart, ischuria renalis, and stricture of the sigmoid flexure of the colon. Through each of these topics we propose to follow the author: and as the book itself will probably come into the hands of few of our readers, we shall endeavour to condense the views which it presents, so as to give a just though perhaps incomplete picture of its contents. This we shall be the better enabled to do, as the treatise is not characterised by great compactness of expression or arrangement: and all that is original or important may be compressed into a comparatively small space. We are pleased, however, to be able to state, what cannot be said of many medical works of much greater pretension, that the style is easy, natural, and generally correct: and the reader is allowed to fix his attention upon the meaning, without being perplexed by the intricacies of doubtful or involved construction, or dazzled by misplaced attempts at elocution, or offended by gross violations of the ordinary rules of good writing.

The first in the series of essays which constitute the work, is that upon the exhaustless subject of fever. The doctor at once allows us to perceive towards which side of the controversy, as to the pathology of this form of disease, he inclines, when, in the introductory paragraph, he adverts to what he considers "a common error in some parts of the world—that of supposing some one symptom cardinal, and converting it into a hinge, on which all others are made to turn."

In his observations relative to the causes of fever, we do not find much that is peculiarly new or interesting; but an incidental remark, as to the influence of malaria in producing jaundice, attracted our notice, and may not be unworthy of that of our readers. Dr Brown is disposed to ascribe jaundice, in some instances, to the direct operation of mias-

mata, in a state too much diluted to produce their ordinary effects of intermittent and remittent fever. "The British army," he observes, "marched from Paris into French Flanders in the beginning of 1816. Part of it was stationed in Artois, on the somewhat low and flat banks of the Scheldt. The country being well drained and cultivated, ague was very rare, and remittent fever by no means prevalent; but the slower operation of malaria was visible, during the first two years the army remained there, in the extraordinary number of cases of jaundice which occurred. Many of them proved very intractable. As our troops became accustomed to the climate, this disposition to jaundice disappeared." Believing, as we do, that this complaint, in the great majority of instances, depends on a diminution or suspension of the secreting action of the liver, and not on any disease of the ducts, we have no difficulty in admitting the correctness of Dr Brown's inference as to its cause, on the occasion alluded to.

Agreeing fully with the author, that miasmata, either of vegetable or animal origin, are the frequent cause of idiopathic fever, and that they operate by entering the system through *the medium* of absorption, we cannot coincide with his opinion, that "common causes, such as atmospheric vicissitudes, errors in diet, excessive fatigue, exposure to wet, &c." are inadequate to the production of the disease, except by bringing into action a poison already working in the system, or by disposing the frame to be more readily acted on by the general causes. Experience has abundantly taught us, that fevers occur at seasons and in situations in which miasmata do not prevail; and it is unphilosophical to conclude, that because they generally proceed from this cause, they should under all circumstances be ascribed to it, however obviously they may appear to have a different origin. Nor is such a conclusion necessary to support the pathological view which the author takes of fever: for, supposing it to exist altogether independent of those local irritations or inflammations to which it is becoming fashionable to refer it, we are not authorized by any facts within our knowledge to infer, that the general vice or derangement of which it may consist, is incapable of arising from the influence of changes

of temperature, or other alteration of the circumstances essential to the healthy operations of the system.

In considering the nature of fever, Dr Brown first presents us with a sketch of the opinions of former writers, dwelling more particularly upon those which ascribe the disease to local inflammations. "Dr Beddoes" he informs us, "was the first in Great Britain who brought forward inflammation, if not as the cause of its phenomena, at least as an important concomitant. He did not, however, profess to be perfectly original in his views, but acknowledged his obligations to Germany. Since his time, most writers upon the subject of fever have been honourably distinguished from those who had preceded them, by close reasoning from the phenomena of the disease to functional or organic changes, with which we can beneficially contend; and there has been an increasing disposition to examine the organs after death, and to seek there a confirmation or refutation of the inferences drawn from the symptoms. The most distinguished advocates of the inflammatory hypothesis in Great Britain, have been Dr Clutterbuck, who ascribed the disease to inflammation of the brain, and Dr Mills, who has run parallels with much spirit and ingenuity between various forms of fever and inflammations of many organs. Drs Jackson and Armstrong superadded to the inflammatory doctrine that of congestion, and more recently, in France, Professor Broussais has considered inflammation of the stomach and bowels as the primum mobile of all fevers."

Dr Brown, however, professes himself altogether dissatisfied with this hypothesis in any of its forms. One of the arguments which he urges against it is common to all its opponents, and appears to us not destitute of weight. In the following observations, where we do not quote his words, we endeavour to convey his meaning. Were inflammation of any organ the primary link in the chain of diseased action upon which all others depend, the conclusion seems irresistible that the stimulant practice must always prove injurious, and very generally fatal. But not only has experience taught us that patients frequently recover under this practice, but we are informed, on authority that cannot well be questioned, that in some epidemics it has been eminently successful. Were pleurisy, or peritonitis, or even bronchitis, treated upon this plan,

should we find the number of recoveries nearly proportionate to those which occur under the same treatment in fevers? May we not at least deduce from this fact, that no very considerable or acute inflammation of any important internal organ exists in those who recover; that if inflammation does exist, it is of a slight or sub-acute character, and wholly inadequate to the production of so formidable a disease as we often encounter in idiopathic fever? From the exceeding violence of cases, even from their very onset, which frequently recover under what the advocates of the inflammatory hypothesis consistently maintain to be most adverse treatment, is it not probable that these gentlemen overlook some important phenomena, or do not draw the legitimate inference from them?

Opposed as the author is to the general doctrine, he appears to be still more so to that form of it which, "partly from a considerable portion of talent possessed by its author, M. Broussais," and embodied in its support, but chiefly "from the zeal displayed in extolling its merits by a host of active partisans, has obtained the most ascendancy over the public mind." Into this part of his work the doctor has infused a considerable portion of warmth of feeling, called into action by a conviction on his part, of a general want of courtesy in the celebrated French medical reformer, and perhaps heightened by some private grievances which he appears to have sustained. We shall, however, endeavour to extract his arguments without the condiments with which they are served up; as though they may thus be rendered less racy to the taste, we are among those who would prefer the imputation of insipidity to the charge of provoking or ministering to a depraved or unwholesome appetite.

The doctrine of M. Broussais is stated in the following terms: "All those fevers hitherto considered essential or idiopathic, depend upon inflammation of the lining of the alimentary canal, which inflammation uniformly commences in the stomach. Fever is always the result of irritation of the heart, primary or sympathetic; and this irritation is a shade of inflammation, or carditis. Of course, in idiopathic fever, or what has been hitherto deemed such, this carditis is sympathetic of gastro-enteritic inflammation. As every inflammation, wherever seated, sufficiently intense to produce fever

on reaching the heart, is capable of being communicated to the brain, and as it does not change its nature by transmission, inflammation of this organ is an occasional adjunct of idiopathic fever."

To establish the truth of this doctrine it is necessary that the uniform existence of gastritis or gastro-enteritis in fevers should be proved; and this, according to Dr Brown, has not been done. Dissection has not always revealed marks of previous inflammation in the mucous membrane of the stomach. A case of fatal typhoid fever is detailed, in which, though the intestines were upon examination found to have been inflamed and ulcerated, "the mucous membrane of the stomach was perfectly healthy." Against the inference, that because gastric or gastro-enteritic inflammation is revealed by dissection in the great majority of febrile cases, it must therefore exist in all, the argument may be urged, that the cases in which an opportunity for dissection is offered, are the worst, and therefore most likely to be attended with local disorganizations, which all admit to be very frequent accompaniments of fever. But it is said that inflammation may exist during life, and yet leave no traces after death. The reply is obvious, that the positive proof by dissection must be abandoned; and the question of the uniform existence of gastric inflammation in fevers must rest upon the evidence of the symptoms. The experience of practitioners must now be appealed to; and there are comparatively few who will not admit that they have met with cases in which symptoms of gastric or even enteric inflammation were wholly wanting. There is often no pain upon pressure, no nausea nor vomiting, in fact, no uneasy sensation in the abdominal region; and the only certain evidence of disordered stomach is the want of appetite, which may result as well from diminished energy as from over excitement of that organ. If inflammation exist under these circumstances, it must be exceedingly feeble, and altogether inadequate to the production of those violent symptoms which are sometimes met with in such cases of fever. But even allowing the uniform existence of a certain degree of gastric inflammation, we by no means necessarily admit the inference that it is the proximate cause of the disease. On the contrary, considering the relative degree of violence in the gastric affection, and that of other parts of the system, we

might with greater propriety view it as an effect than a cause, and they who maintain that fevers are general affections of the system, readily admit that the stomach shares with all other organs in the diseased action, and may be more or less severely irritated or inflamed, according to its peculiar susceptibility, or the energy of the morbific agent. The circumstance urged in favour of the gastric hypothesis, that the alimentary canal is the centre of extensive sympathies, will operate as well in an opposite direction; for if on this account inflammation of the mucous membrane may produce diseased action in other parts of the system, this very inflammation may be excited by diseased action previously existing elsewhere; and we are then left to decide which symptoms have the priority in point of time—those which are properly gastric, or those which point to some other portion of the body as the seat of disorder.

The next point in the doctrine of M. Broussais is the existence of *carditis* as a secondary affection: and this does not find greater favour with our author than the first proposition. He denies that the mere acceleration of the pulse is indicative of an inflammatory condition of the heart. Nor do the sequelæ of fevers show that it had existed during their continuance. In rheumatism of the heart, with increased frequency of the pulse, there is inflammation, and the majority of cases of chronic affection of the heart, which have fallen under the notice of Dr Brown, are referrible to that complaint, while he scarcely ever met with it as an effect of fever. Post mortem examinations equally fail as a general rule in indicating carditis. "Many cases" says the doctor, "have I examined most carefully, in which there were no traces of inflammation of this organ; and the same has happened to others." He admits, however, that authors of unquestionable discernment and good faith, have found marks of affection of the heart in dissection of those who have died of fever:" and upon a careful examination of these cases, he admits, that in some "there does appear to have been inflammation of the lining membrane of the heart, with a similar affection of that of the aorta: but in most of them the affection seems to have been the mere result of impaired nutrition in diseases of long standing, softness and flaccidity of the organ being the morbid change discover-

ed, with a brownish appearance of the lining membrane, probably from that stasis of blood in the capillaries which is so generally observed in fevers."

In addition to the reasons above assigned for withholding our assent from M. Broussais's doctrine, the author states two facts, which he considers in direct opposition to it, and "the bare enunciation of which will suffice to shake our confidence" in its correctness. These he throws in as a kind of surplusage; for "in a discussion of this kind, it should be remembered that the burthen of proof rests with the propounder of the theory," and the reader may be spared the trouble of "a host of *positive* arguments" which might be advanced against it. The facts alluded to are the speedy removal of fever—sometimes in less than forty-eight hours—by the cold affusion; and the effect of the arsenical solution in curing ague. In reference to the latter fact, we shall quote the words of the author:

"'Each regular paroxysm of intermittent fevers,' says M. Broussais, 'is the sign of a gastro-enteritis of which the irritation is transferred to the cutaneous exhalents, which produces crisis.' 'If arsenic' says the same author, 'is not promptly fatal, it excites inflammation of the gastric passages in shades, which vary according to the dose, and the idiosyncrasy.' I should like much to listen to the special pleading by which M. Broussais would endeavour to reconcile these propositions with the known effect of arsenic, in preventing the recurrence of the paroxysms of intermittent; the prevention of inflammation of the digestive canal by a mineral whose peculiar effect it is, on his own showing, to produce inflammation."

Having cleared the way by an examination of the opinions of others, the author gives his own views of the pathology of fever. The poison having entered into the circulation comes into contact with the various parts of the system, upon which it exerts a direct influence. Among the first and most obvious of its effects, are those produced upon the general nervous system. In some instances the patient is almost struck dead, as by a blow, and the system never rallies. These, however, are extreme cases, to which the author has recourse, simply to illustrate and enforce his proposition, not to exemplify the ordinary operation of the poison. The phenomena of common

remittent, and even intermittent fevers, demonstrate, in his opinion, that the nervous system is affected from the very commencement of the disease. From what other source proceed the giddiness and pain of the head, the incapacity of attention, the ringing of the ears, the aching along the spine, the chilliness and rigors with which fevers open their attack? This sensorial disturbance continues to a greater or less extent throughout the course of the disease, and is often especially exhibited in the latter stages. At the commencement the symptoms are those of depressed sensorial power; and if inflammation of the brain sometimes makes its appearance towards the close, it may be ascribed to the new irritation or disturbance of the organ consequent upon its primary depression. But the author does not claim priority for the affection of the nervous system: he only maintains that it is not second in point of time to any other affection; and thinks that a little attention to the cause of fevers and the effects of remedies upon them, will show that it yields to none in practical importance. The vascular system may be affected by the poison at the same time with the sensorial, and by the same immediate operation. The disturbance, therefore, of the circulation is equally a primary effect with that of the brain and nerves: but the reciprocal dependence of all parts of the frame is such, that we cannot conceive of these two systems as each having its own insulated morbid process throughout the course of a protracted fever. They mutually influence each other; "though this dependence is not so essential as to preclude the possibility of a preponderance of the disorder of one system over that of the other, as sensorial excitement and nervous irritation over muscular disturbance. It may be remarked, however, that when the nervous depression is great, there is generally a proportionate depression of the circulation."

The disturbance in the vascular system is accompanied by inflammation, the most usual seat of which is in the brain, the bronchial lining, the liver, the stomach, and intestines. "These do not appear to be the cause of the fever, but are occasional and important concomitants, Their detection frequently requires diligent investigation, and their existence always vigilant attention." It is our duty to controul and even to subdue them, if we can do so consistently with prudence;

but "it is one thing to subdue these inflammations and another to cure the fever."

"The nervous and vascular functions being thus disordered, those of secretion, assimilation and nutrition must follow in their train, and the disease becomes one of the whole system in every kind of sense. At the commencement of the disease there is prostration of strength from the action of the poison on the nervous system; at the close there is positive debility, at once from defective nutrition, and the agitation of the previous storm."

Before closing the subject of the pathology of fever, it is proper to give the author's views relative to that condition of things which often occurs in the first stage of fevers, more especially those of the typhoid character, sometimes also in their course, and which it is now fashionable to designate by the name of the congestive state. This term is applied under the impression that the accumulations which take place in the great internal veins, are the main cause of the symptoms, and the chief source of danger. Dr Brown however believes that the venous congestion which takes place, is in fact the result of the enfeebled action of the heart, consequent either upon the depression of the sensorial power, or the direct operation of the poison. This is an opinion which we have long maintained, and which appears to us almost too obvious to require support. The heart acts with diminished vigour; the arteries do not receive their usual supply; the blood, therefore, necessarily accumulates in the venous system; and we have congestions of the vena cavæ, the sinuses of the brain, the hepatic veins, and the whole extent of the vena portæ. But though an effect of the enfeebled condition of the heart, congestion is unquestionably calculated to aggravate the unpleasant condition of system in which it has its origin. Hence petechiæ, discharges of dark coloured blood from the bowels, aggravation of stupor or delirium, oppressed and laborious breathing, epigastric uneasiness and distention, and vitiated secretion from the liver—symptoms which mark the congestive state in bad cases of fever. The author inquires whether the affections of the mucous membrane of the intestines, which are considered by the physiological physicians essential parts of the disease, may not in reality be dependent on the con-

gested state of the vena portæ. The acrid matter poured out by the liver, under these circumstances, must excite irritation in its passage through the bowels; and it is highly probable that the inflammation and ulceration of these parts, so often discovered in fatal cases of fever, sometimes depend upon this cause. Facts seem to support the opinion. The author has frequently observed that inflammation and ulceration of the intestinal mucous membrane, have supervened on hepatitis, in which an irritating colluvies has been poured into the bowels. The ulceration moreover is most frequently found in the vicinity of the iliac valve, "where some degree of remora would detain the irritating contents of the bowels in contact with their lining." The intestinal disease may arise in another manner from the congested state of the portal circle. The stagnation of the blood in the whole range of the bowels would naturally excite irritation in the vessels, which might readily run into the inflammatory and ulcerative processes.

In giving the above pathological details, we wish to be considered merely as representing the opinions of the author, without expressing our own full accordance. It is desirable that the medical public should be put into possession of all that may be said on different sides of every doubtful or disputed point, so that every individual having before him the materials of an enlightened decision, may exercise his own judgment with a fair chance of at least approaching the truth.

We now come to the treatment. Dr Brown is one of that school which believes that we have not the power, in a great majority of instances, of cutting short an idiopathic fever, but only of conducting it safely to a natural termination. Violent remedies may sometimes break the association of morbid actions; but the practice is dangerous; as, if the end is not accomplished, the system is left to struggle on against the force of the disease with diminished powers of resistance. He very properly remarks, that nosological distinctions are of little use in practice; as "our business at the bed side is more with the organs affected and with the modes of their affection, than with the accurate grouping of the whole under a precise designation." In the employment of remedies he is not afraid of a name, but regards the condition of the system. In the treatment which he recommends, he differs from

the advocates of the inflammatory origin of fever, less in the character of his remedies and the mode of their application, than in the extent to which he is disposed to carry them. Thus he would cease to urge a remedy for the cure of a local inflammation when the evidences of that inflammation had ceased, even though the fever might still continue; while they who believe that the fever depends upon the local inflammation, would continue their measures so long as the general disease might remain unsubdued, considering its existence as a proof of the continued existence of the local affection.

General bleeding. This he recommends as one of the means by which the patient may be guided safely through the disorder, not as a method of immediate cure. The only fever which he has been able to cure speedily and certainly by the lancet, is the "causus, or synocha, which appears in warm climates, and seems generally to owe its origin to the stimulus of heat." It is entirely different from the miasmatic remittents of the same countries, which are much less tractable. To very copious bleeding, such as practised by the late Dr Jackson, he is opposed both from reason and experience. If it fail to cure, which it frequently does, it leaves the patient in a state unfit for struggling through the disease. One moderate bleeding at the commencement is usually sufficient. In cases attended with permanent excitement, fifteen or twenty ounces may be taken with propriety; and if the excitement continue for a day or two afterwards, the lancet may be again resorted to. "In that form of fever," the author observes, "in which the sensorial or vascular depression is great—the congestive fever of Jackson and Armstrong—the patients appear to be benefited by one very moderate bleeding at the commencement; but very rarely indeed have I thought its repetition prudent, or found, if practised, that there was not subsequent cause to regret it." Other cases in which bleeding must be cautiously used, are those of the aged, the infirm, and habitual free livers, and of those, even when not beyond the middle life, "whose minds and bodies, either from the circumstances in which they are placed, or from a natural ardour of temperament, are unceasingly taxed to the very utmost of their powers. With this latter class, to which medical men

themselves too frequently belong, we must deal tenderly, or the mischief will speedily be irretrievable." "In any fever, should the excitement be vacillating, the delirium rather of a low and muttering kind, sordes forming on the tongue and teeth, subsultus tendinum, the countenance of a purplish hue, a clammy moisture on the skin, which the taking of warm liquids readily increases to a considerable sweat, general bleeding must be cautiously avoided. Should appearances such as these be accompanied by topical phlogoses, topical bleeding will be the only form of it admissible."

Local bleeding. When inflammations attend the advanced stages of fever, leeches are chiefly to be relied on. To the head, the thorax, the abdomen, they may often be applied with great advantage; to the head in cases of delirium, whether of the torpid or excited kind, but more freely in the latter; to the thorax when bronchial inflammation is discoverable either by the ordinary signs or by the stethoscope; to the abdomen when there is pain upon pressure, and to that part of it in which the pain is most experienced. This in ordinary remittents is usually at the epigastrium, in typhus as frequently at the umbilicus, or towards the right ileum.

Blisters. These may be applied to the head in the torpid form of delirium, to the chest in bronchial affection, and to the abdomen when inflammation exists. They should, however, be preceded by leeches once or twice employed. The author doubts their beneficial effects when applied to the nape of the neck, and thinks that the irritation they occasion might well be spared the patient.

Mercury. With regard to the supposed influence of mercury in the cure of fever, the author coincides with those who think that the fever does not subside in consequence of the full action of the mercury; but that the action of the mercury takes place because the fever subsides. He mentions the case of a female ill with continued fever, to whom mercury was administered without any effect till she began to convalesce, when the mouth became affected. An error in diet brought back the fever, and the ptyalism immediately disappeared. Upon her restoration to convalescence, the affection of the mouth again made its appearance. He considers that "the great control exerted by mercury, with or after bleeding, over

most of the phlegmasiæ, compared with its slight influence in fevers, tends materially to confirm the view that is taken of the distinction between these two orders of diseases. But notwithstanding his disbelief in the power of mercury to subvert the disease, he still recommends its employment in alterative doses, to correct the deranged biliary secretion, and to relieve the inflammation and ulceration of the intestinal mucous membrane which frequently takes place in the latter stages.

Emetics the author thinks occasionally advantageous at the commencement of the disease, particularly in typhous cases without epigastric tenderness. They are useful by assisting in emptying the primæ viæ, by the rousing effect of their shock, by powerfully determining to the surface, and by the general freedom they impart to secretion.

Cathartics, he thinks, are sometimes carried too far. "After emptying the intestinal canal at the beginning of the complaint by calomel, combined with colocynth, jalap, or some other active cathartic, it seems sufficient during its progress, along with alterative doses of calomel, to administer castor oil or the neutral salts, when there is any deficiency in the alvine discharges; unless the bowels are not found amenable to these mild measures, when colocynth, senna, or some active purgative may be employed."

The *sulphate of quinia* he has found the most certain remedy in intermittents. He seems to be no friend to active stimulation; but occasionally finds wine advantageous. "In some cases of protracted fever, the system will appear to vacillate for some days on the confines of convalescence, without actually attaining it. The symptoms are much mitigated, but have not totally ceased. There is no restoration of appetite; the tongue is dry, and perhaps a little sordes adheres to it and to the teeth; the pulse probably does not exceed eighty, and is feeble; there is some slight subsultus; the hearing is not perfectly restored; delirium cannot be said to exist, but questions are not readily understood, and are consequently slowly answered; the countenance is vacant and the eye wandering; the temperature of the surface is rather below than above the natural standard. In cases like this, a moderate quantity of wine really acts like a charm, and appears to produce convalescence, sometimes even in a few hours." The

author is strongly opposed to the use of large quantities of wine or other stimulants, when there is reason to apprehend that depletion has been carried too far. "Such practice wrings from the patient most debilitating sweats, and speedily exhausts the little strength which the former error had left." Small quantities of wine, with light nourishment, free ventilation, extreme cleanliness, or small doses of opium, or hyoscyamus in camphor julap, are the remedies he recommends.

Narcotics. The author describes minutely a state of fever occurring more frequently in females than males, in which the affection of the nervous system greatly preponderates over that of the vascular, and in which he finds very great advantage from the use of opium in small doses frequently repeated. The pulse is frequently calm, scarcely exceeding ninety in the minute, through the whole course of the complaint. There is little heat of surface, little derangement of the urinary secretion, and the affection of the head seldom amounts to delirium. But the sensibility is excessive; the slightest noise is distressing; sounds imperceptible to others are distinguished by the patient; and the watchfulness, tossing and restlessness are much complained of. The hepatic secretion is generally deranged, and there is usually some affection of the bronchial and intestinal mucous membranes. "The cases are exceedingly lingering, frequently lasting nine or ten weeks." Besides opiates, the author recommends leeching to the head, chest, or abdomen, laxatives, alterative doses of mercury, and a cooling regimen. Sometimes, towards the close of a much more virulent form of fever, a state of things occurs which is very much benefited by opium. It is marked by a subsidence of vascular disturbance, and the occurrence of an incessant vivacious delirium, particularly at night," attended with subsultus tendinum and jactitation. The pulse is soft, weak, and not very frequent, and the skin tolerably cool. Along with the opium he usually allows a little wine. From the character of the symptoms and the effects of the treatment, he is disposed to consider the affection analogous to delirium tremens.

In his sketch of the treatment of fever, of which the above is an abstract, the author does not pretend to detail the whole routine of practice, but merely touches on the more prominent points with regard to which there is room for difference of opinion.

With regard to inflammation, the author says little that is not already familiar to the profession. We shall content ourselves with the following extract, in which the reader is cautioned against a too free use of the lancet in the inflammatory diseases of certain individuals.

"There are persons who, from a natural thinness or weakness of the parietes of the heart, have constitutionally a very languid circulation. To an ordinary observer they will often appear strong and robust, for they are frequently large and florid; but their freshness and colour will generally be observed to have a purplish tinge, as if depending on venous plethora; and their fleshiness will be found to be rather cellular and adipose than muscular. On exertion, they are readily out of breath. If their circulation be examined, the pulse at the radial artery will be found small and weak, and the heart, explored under the left mamma, gives a feeble impulse. A heart like this, naturally too feeble, may be reduced to such a state of debility by very large bleedings, as to be totally unfit for the office it has to perform. If I mistake not, the death of a medical man in London, which from a peculiar circumstance connected with it produced some sensation, arose from bleedings too large, which a structure such as has been described ought to have forbid. Inflammation is perfectly compatible with this structure, and must be subdued by the appropriate remedies; but still I hold that not a drop of blood should be shed that can be spared."

In the essay upon rheumatism, the chief point of interest is the opinion strongly expressed by the author, that even in the most inflammatory forms of this complaint, direct depletion should be cautiously practised. "We cannot," says he, "attempt to cure rheumatism by bleeding and other evacuants, without imminent risk of causing metastasis of the disease to an important internal organ, most commonly to the heart, its investing membrane, or both." He admits that translation to the heart will sometimes occur, even when evacuants are altogether abstained from: but goes on to say that all the cases of speedy fatality which he has observed have occurred after copious depletion. Sometimes the disease attacks the heart without relinquishing its hold upon the external parts. In either case, whether the heart or its investing membrane is affected, "we have no refuge but in those decided depletory measures which are so much deprecated in the primary attack." But, notwithstanding his dread of copious deple-

tion, he is unwilling to join with those British practitioners who recommend the use of bark and other tonics in inflammatory rheumatism. A moderate antiphlogistic treatment he has found best adapted to the disease. "From one moderate bleeding no inconvenience will be found to result to a person not above middle age; but we should not think of repeating it, nor of making that one so large as we should in an internal inflammation in the same individual. Local bleeding, when the inflammation dwells long in any joint, may be safely and profitably employed."

We are convinced that, however this exceeding caution may be suited to the disease as it occurs in Great Britain, it is inapplicable to the ordinary inflammatory rheumatism of this country, in which it is often necessary to push the lancet much further than accords with the recommendation of the author. Still the caution is valuable; as this form of inflammation is certainly more disposed to change its point of attack, and assault the vital organs with dangerous violence, than most other phlegmasiæ; and the experience of every physician in extensive practice must have furnished him with instances in which metastasis of the disease from external to internal parts, has been apparently the result of very copious depletion.

In diseases of the heart the author appears to have had large experience, and most of the remainder of the volume is occupied with his treatise on this subject. A close analysis of this essay, with a compendious account of all that it contains, would lead us quite beyond reasonable limits; and we shall content ourselves with referring our readers to the work of Laennec, republished in this country, for most of the important facts detailed in it, as also to the reviews in preceding volumes of this Journal of Mr Adams's paper in the Dublin Hospital Reports, and of Testa's valuable work. We shall, however, run rapidly over it, and select as we go such facts and remarks as may seem to us at the same time valuable in themselves, and worthy of notice as proceeding from the author's own experience or reflection.

These generally relate to affections of the heart arising from translated rheumatism. The attention of the profession appears to have been first called to this subject by Mr Dundas,

in a paper published in the first volume of the Medico-Chirurgical Transactions. The disease has been subsequently noticed by other English authors, and is familiar to many American practitioners. Several cases of it have fallen under our own observation. It is rather singular that rheumatism should have been overlooked as one of the causes of diseased heart by such men as Laennec and Bertin; perhaps it is less operative in France than in this country or Great Britain. Dr Brown observes, that he "has estimated at one half the proportion of cases attributable to it;" and, judging from our own experience, we should be inclined to the opinion that the proportion is at least equally large in the United States. We have before stated the opinion of the author, that too copious depletion is apt to produce a transfer of rheumatism to the heart. He thinks that neglect of the disease is very liable to be attended with the same result, except that in the latter case the complaint of the heart is more apt to assume a chronic form. Some of the worst cases he has witnessed have been in sea-faring persons, who are frequently without the benefit of medical assistance during their voyages; and, on reaching their port, too frequently neglect to avail themselves of it when required. "The labouring classes generally, as being more exposed to the causes of rheumatism, and less likely to attend to the necessary seclusion during its attacks, and more so to neglect the first indications of the heart's being assailed, present the greater number of deplorable cases of cardiac disease from this cause. But those in more affluent circumstances are by no means entirely exempt from it." With this experience of the author our own observation does not agree. Of the cases which have come under our notice, the majority have been in children who had been exposed to no hardships, and had been carefully and tenderly nurtured. The author states that "scarcely any age is exempt from disease of the heart from this cause. I visited lately a boy twelve years old, labouring under that form of cardiac disorder termed hypertrophy. I learned that he had been subject to rheumatism from his ninth year, and to use his mother's expression, 'the beating of the heart began with his first attack of rheumatic *fever*, and had been increasing ever since.' For obvious

reasons such occurrences are much more frequent in older subjects." On this point we can only say, that of six or seven cases which we recollect to have witnessed, only one was in an adult, and in that instance the patient was a female.

Rheumatism attacks either the pericardium or the substance of the heart itself. When the translation from external parts has been sudden, and death has speedily ensued, dissection exhibits abundant evidence of inflammation of the investing membrane. The internal surface of the pericardium is found covered with a layer of coagulated lymph, by which the cardiac portion is loosely agglutinated to that part of the membrane which in the natural state lies loosely about the heart. The muscular substance of the heart has a blanched appearance, and effused lymph is discovered upon the lining membrane, adhering to the valves and the chordæ tendinæ. The chief seat, however, of the inflammation is in the pericardium.

The symptoms of pericarditis are usually considered as very obscure, and its diagnosis difficult. Laennec has witnessed all the symptoms attributed by nosologists to this disease; and yet, upon post mortem examination, has discovered no trace of it; while in other cases dissection has revealed to him the existence of severe pericarditis, which he had not suspected during the life of the patient. Dr Brown mentions the following as the symptoms which he has observed in all the unequivocal cases of the acute form which had fallen under his notice. These cases, with one exception, arose from rheumatism; in all the symptoms were alike. "These were acute pain and sense of heat in the region of the heart; great difficulty of breathing; extreme restlessness, anguish and anxiety; the patient lay on the back and could not for a moment alter his position to the left side; the face was anxious and pale, or if flushings occurred, they were very transient, and it was bedewed with perspiration; there was frequent disposition to syncope. The action of the heart was in every case bounding and forcible, and the pulse strong, full and frequent. In no other cases have I observed in an equal degree that rising of the jugular veins synchronously with the systole of the heart, which Mr Lænnec appears to consider distinctive

of hypertrophy of the right ventricle. This rising is, in these cases, not confined to the external, but is equally perceptible in the internal jugular."

The author informs us that he has never yet observed this form of diseased heart from translated rheumatism, excepting when free depletory measures, the hot bath, or both had been employed for the primary affection.

But when it has once occurred, the most powerful depletory measures present the only chance of saving the patient; and the earlier they are applied, the greater is the prospect of this fortunate, though rather rare result. The author records one case, in which a very large bleeding, immediately upon the occurrence of the symptoms, proved effectual. The patient was a stout country girl, for whom the warm bath was prescribed as a remedy for an attack of acute rheumatism, under which she laboured. Within ten minutes after leaving the bath, she was seized with violent pain in the region of the heart, attended with the most distressing dyspnœa, frequent sighing and fainting. The pains and inflammation had almost entirely disappeared from the extremities. Thirty ounces of blood were immediately abstracted from a large orifice in a vein of the arm:—the symptoms were speedily relieved; and by the use of digitalis, the cure was completed in a few days. No return of the disease to the extremities took place.

When, instead of spending its force upon the pericardium, the rheumatism attacks more especially the muscular substance of the heart, the disease is much less acute and violent than in the preceding case, and usually much less rapid in its progress. Its duration is various—from a fortnight to several years. Hypertrophy, with dilatation, is the particular form of the affection which has most frequently fallen under the notice of the author. "This disease occurs in cases in which the primary one has been treated by bleeding, but likewise very frequently when that remedy has never been employed: and the primary affection is persistent in the joints for some time after its occurrence; indeed, this affection remains during the whole of its existence, unless the affection of the heart degenerate into a completely chronic form." The doctor is unwilling to consider this form of the disease, as strictly speaking, a metastasis of the rheumatic affection. There is not, as

in the former case, a sudden cessation of external pain and inflammation upon the occurrence of the cardiac affection: though if this "receive a sudden increment in its course, as it occasionally does, there is generally a perceptible diminution of the affection of the joints."

Occasionally the attack is open, and cannot be overlooked. The symptoms by which it may be recognized are violent palpitation, pain in the precordial region, and frequently at the inferior angle of the scapula; pulse hard, full, and in the absence of the palpitations, very slow; great anxiety, and some degree of dyspnœa. If the disease in this stage "be neglected or imperfectly subdued, the heart becomes hypertrophied, and occasionally affected with other lesions of structure, in a few weeks." It can, however, generally be repelled, if promptly attended to. The remedies recommended by the author are general and local bleeding; counter irritation by blisters and setons; digitalis; and mercury pushed so as to affect the mouth. "The diet should be as unstimulating and innutritive as is consistent with the necessary demands of the frame, and so arranged as not to be calculated to distend the vascular system with liquids; and the greatest stillness of body and mind should be observed." In this, as in all other diseases of the heart, "one great rule is, to give the organ as little as possible to do; and this object should be steadily kept in view in all the means we adopt; for, without it, all other means are nugatory. By hygienic arrangements—by keeping the volume of the circulating mass at a low ebb—by cautiously avoiding all irritants of the organ, we may frequently, especially in young subjects, cure the disease almost without medicine."

The above remarks are especially applicable to cases in which the disease is well marked, and obvious at its origin. "But frequently the attack is very insidious, and the progress of the disease exceedingly slow, enduring indeed for years. The early symptoms generally commence during a rheumatic attack; but they are so obscure, that they are little heeded by the patient, and probably not mentioned to the medical attendant. The first symptom is usually palpitation, to which succeeds very slight, dull, and obscure pain, generally felt in the precordial region, at the inferior angle of the left scapula, or in both situations." The rheumatic symptoms at length dis-

appear, and each successive diminution of them is marked by an increase of the cardiac affection. Exertion now becomes irksome, and if persevered in, produces distressing palpitations, attended with a pulse either unduly forcible and frequent, or small and irregular. Even when the patient is perfectly tranquil, "a certain degree of excess of force in the action of the heart will be perceptible." Giddiness and dyspnœa are experienced; and the irritation often extends to the liver or stomach, producing biliary derangement, and tenderness in the epigastrium. If not now arrested, "the disease proceeds to those violent beatings of the heart, the extreme difficulty of breathing, the dropsy, and all the distressing and uncontrollable symptoms which characterise the last stage of hypertrophy. It may be years ere it attain this stage; and with prudent management, an individual, whose circumstances allow a life of leisure, may pass in tolerable comfort to a good old age, although he be affected with the chronic form of the disease." When the symptoms are those of hypertrophy, and there is excess of power in the heart, the remedial and dietetic measures should be those adapted to inflammation. They are the same in kind with those recommended in the more open form of the complaint; but are to be regulated in degree by the circumstances of the case. The author places great reliance upon mercury, the power of which, he observes, is wonderful in these cases. Its effect has frequently surpassed his most sanguine expectations; and he advises that we should not despair of administering it with benefit, unless in cases of extremity.

When the disease is in the form of passive dilatation or aneurism, with sufficient power of the heart, though it has the same origin, it requires, when fully established, a very different treatment. We have in this case two conflicting indications, viz. to prevent or remedy plethora, and to support the power of the heart. An occasional *small* bleeding has been found useful by the author in diminishing plethora, and relieving the difficulty of breathing; but venesection must be rarely and sparingly practised. The uneasiness in the hypochondriac or epigastric regions, induced by the turgescence of the venous system in those parts, is best relieved by leeches, blisters, with a moderate quantity of blue pill, and a small pro-

portion of calomel. The author has found a spare diet, with a proportion of animal food, and as little liquid as possible, best adapted to this form of disease. "The patient will not bear the rigid diet of the former state." When the action of the heart has been very feeble, he has found himself obliged to allow a little stimulus, and has preferred spirit and water, "as having the least tendency to induce plethora."

In diseases of the heart generally, the occurrence of dropsical effusion often produces great amelioration of the cardiac symptoms: and if the kidneys can be excited so as to carry off the effused fluid, very great relief may be expected. For this purpose, Dr Brown employs squills, with a small proportion of digitalis, in cases of passive dilatation; and in those of hypertrophy, gives the digitalis more boldly. "Should we fail to excite the action of the kidneys, recourse must be had to hydragogue purgatives, for the evacuation of the accumulated fluid."

"Opium, which, in combination with calomel and antimony, we may administer fearlessly and beneficially in hypertrophy, must be cautiously and sparingly used in passive dilatation." The author has "seen alarming and heard of fatal effects from a full dose. The reason is obvious; it diminishes further the already too feeble action of the heart."

Sympathetic disorder of the heart is treated of in a distinct essay. By a sympathetic affection, Dr Brown means "some disorder of an organ, so far dependent on a disorder of another organ, that if this were to cease, the former would no longer exist. There can be little doubt," he observes, "that in the case of the heart, as of other organs, these sympathetic affections, long continued, may attain an independent existence." The following symptoms, singly or in combination, are considered as indications of this sympathetic disorder;—"palpitation, intermittence of action, pain in the region of the heart, and occasionally a tendency to syncope; and these may be induced by physical lesions of the brain and spinal marrow, by mental emotions, by disorder of the digestive organs of the uterus, and perhaps we may add, of the urinary apparatus." The degree to which irregular action of the heart is perceptible to the patient, depends greatly on the sensitive state of his nervous system: and dyspeptic or hyste-

rical persons often complain of distressing palpitations, "when in truth the heart's action, explored by the stethoscope, though found to be frequent, forcible, or irregular, is by no means very considerably so. In this respect, there is a marked difference between the sympathetic and organic affection of the organ. The kind of intermission observable in these cases is also different from that which occurs when the structure of the heart is materially affected. In the former case there is "a simple absence of a complete pulsation, recurring at intervals of varying duration," and we never find that kind of irregularity peculiar to the latter, "in which the heart makes unavailing struggles to empty its cavities, and produces under-beats scarcely to be detected by the finger of the observer." The sympathetic irregularity is also remarkable in being immediately perceived by the patient: while that attending the organic disorder generally escapes his notice. Another point of distinction between the two forms of disease is the frequent total absence of all indications of cardiac affection, which we so frequently find in the sympathetic disorder; while "in the idiopathic form, some deviation from the healthy rhythm, force, extent, or sound of the heart's movements will generally be perceived in moments of the greatest calm." The concomitant affections, moreover, tend to throw light upon the real nature of the disease. But we have not space to follow the author through his account of the various morbid conditions of the system which are most apt to excite irregular action in the heart, nor to detail the treatment adapted to each case. If the physician is able to distinguish the sympathetic affection, he will find little difficulty in detecting its cause; and he will then be guided by his previous knowledge in the application of the remedy.

The next essay is on the subject of ichuria renalis, and consists chiefly of the details of cases of that disease which came under the notice of the author. In the first case there was a total suspension of the secretion of urine for more than six days. The attack commenced with some pain in the iliac region, which subsided and returned several times during the course of the complaint. There was no tenderness upon pressure on the region of the kidneys; no fulness of the hypogastrium; and upon the introduction of the catheter, no urine

flowed from the bladder. There was every reason to believe that the secretion was wholly suspended. The pulse was in the early part of the disease full, and rather hard, but not frequent. Blood drawn from the arm was very sizy. The patient, who was seventy-three years of age, had previously enjoyed good health, and had not been subject to gout or gravel. The treatment consisted in two bleedings, one of which was copious; the application of leeches to the loins; free purging by means of cathartics taken into the stomach, and enemata of oil of turpentine, castor oil, senna, and salts thrown into the rectum; a blister to the loins; and the use of calomel and squill. The blister was dressed with mercurial ointment. As soon as the mercurial fetor was perceived in the breath, the kidneys began to resume their function; and the patient gradually recovered. In the treatment of the case, Dr Brown "acted on the presumption of inflammation existing.

In a second case, the urinary secretion was absent more than eleven days, and yet a recovery took place. The treatment is not detailed. We may infer, however, that the depletory plan was employed, as we are told that the affection was inflammatory, and that "blood taken from the arm displayed a strong buffy coat. The patient was subject to gout, and died eight years afterwards of this complaint, after an illness of eight days. About twenty-four hours before his death the gout suddenly attacked the kidneys with excruciating pain, and from this period the urine ceased to be secreted, as none was discharged; and not a single drop was found in the urinary organs upon dissection. Decided evidences were presented of inflammation having existed in the external surface of the kidneys, and "their cortical substance was peculiarly pale, and as soft as the spleen."

A third case which the author witnessed proved fatal: and in this instance also "the blood drawn from the patient presented a fibrinous coat, as strong as that exhibited in pleurisy and rheumatism." There was, however, little or no pain.

From the presence usually of more or less pain, from the sizy appearance of the blood, and from the evidence afforded by dissection, the author is disposed to consider the affection inflammatory. We have no doubt that the secretory office of the kidneys is occasionally arrested from this cause: and in

such instances cures may probably be effected in a majority of cases, by a judicious use of antiphlogistic measures; but we also believe that a paralysis of these organs may take place without inflammation, and cases of this kind we should consider most hopeless.

Dr Brown was not sensible, in the cases which fell under his observations, "of any urinous smell of the perspirable matter, nor was there any vicarious discharge." In only one instance did he witness coma, which Sir H. Halford found to be a usual concomitant of the disease, as observed by him.

The last essay in the work is devoted to the subject of stricture of the sigmoid flexure of the colon. The author has frequently witnessed the disease, and has found it uniformly fatal —though the period of its duration is sometimes much protracted. In one case, he found "from a very distinct narration, that this period had embraced eleven years." As it is important to the physician to be able to form a correct diagnosis in such cases, we shall quote the author's description of the progress of the disease, premising, upon his authority, that though other writers have noticed the complaint, "such a detailed enumeration of its general symptoms has not any where been given as to render its real situation and nature easily discernible during the life of the patient."

"The symptoms are such as would naturally spring from a slowly but steadily encroaching contraction. At first there is difficulty, but that not very considerable, of regulating the bowels; with occasionally a slight feeling of uneasiness and aching in the left iliac region, extending thence a little below the umbilicus, towards the ilium of the opposite side. This difficulty, however, goes on increasing; purgatives are constantly varied in kind, and increased in strength; but though evacuations be obtained daily, they are small, liquid, and unsatisfactory. With the augmented difficulty of regulating the bowels, there is an increase of the feeling of distention, with flatulency, furred tongue, and inappetency. At length the purgatives cease to act, and then there is distressing pain in the abdomen, which becomes extremely distended. This distention can be distinctly traced from the left flank, running across the upper part of the abdomen, immediately under the stomach, to the ilium of the opposite side, and in this direc-

tion the pain is now experienced." The cæcum is also very perceptibly distended, and is often the seat of severe pain. The rectum, upon examination with a bougie, is found perfectly free from obstruction. Vomiting now takes place, and even the contents of the bowels may be discharged in this way; but the patient rarely sinks under the first severe paroxysm. "A calm generally ensues, purgatives resume their power over the bowels; the tension of the abdomen is diminished; and he is restored to *comparative* health. After an uncertain period, perhaps from a month to seven weeks, accumulation again occurs, with a renewal of all the violent symptoms. This alternation of comparative calm, or paroxysms of intense pain and vomiting, may exist for a considerable length of time, even for a year, or double that period; but ultimately, existence is terminated most commonly by the bowels giving way, and their contents being effused into the peritoneal cavity; though occasionally, the patient sinks previously to the occurrence of rupture and effusion."

Upon examination after death, a stricture, from one to four inches in length, is found at the sigmoid flexure of the colon. The structure of the intestinal coats at this place is entirely changed, and the calibre so much diminished as hardly to admit the passage of a crow-quill.

The means which the author has found most effectual in palliating the symptoms and checking the progress of the complaint, are a light unstimulating liquid diet; mild enemata in the early stages; afterwards purgatives, varied according to the stage of the disease; bleeding in plethoric patients during the painful paroxysms; and a moderate mercurial action. This last he has found more permanently beneficial than any other remedy; yet the relief is still but temporary. Leeches he has repeatedly applied, but without "any decided benefit to the uneasy feelings of the patient, or much influence over the progress of the complaint." Nevertheless, they are the remedies upon which, with a properly regulated diet, and laxative medicines, we should place most reliance. The author applied them over the sigmoid flexure; would they not be more effectual if applied to the anus?

In the above sketch of the contents of Dr Brown's work, we have in many instances omitted critical remarks, which

suggested themselves to our minds; preferring to occupy the space allowed us with the facts and opinions of the author, and leaving the reader to make his own inferences. Were the book generally attainable in this country, we might have contented ourselves with reference to its pages, in many instances in which we have given an abstract or quotations;—but as a review is the only probable medium through which it will reach the majority of our readers, we concluded that the original matter it contained was too valuable to be lost for the sake of comments, of which the utility, if not correctness, might be at least uncertain.

Art. III.—ANDRAL ON DISEASES OF THE CHEST.

Clinique Médicale, ou Choix d'Observations recueilliés à l'Hôpetal de la Charité (Clinique de M. Lermenier). *Par* G. Andral, *Professeur à la Faculté de Mèdecine de Paris.*

Clinical Reports, or Selected Cases drawn from the practice of M. Lermenier, *in the Hospital of La Charité. By* G. Andral.

[Continued from Vol. X, page 325.]

In continuance of the analysis we commenced in a late number of this Journal, we now take up the second volume, the larger portion of which is devoted to the investigation of the phenomena connected with pulmonary consumption. The subject is confessedly of great interest, and though the British press has teemed with innumerable essays, for more than one hundred years, it is questionable whether any material advance has been made in the pathology and treatment of the disease since the period when the Phthiscologia was published by Morton.

No circumstance connected with phthisis is more remarka-

ble than the appearance in the lungs of those small white bodies which have received the appellation of tubercles. The nature and seat of these tubercles constitute the first object of inquiry to which Dr Andral directed his attention. In their primordial state he describes them as resembling small drops of pus, both in colour and consistence. In proportion as the more fluid part is dissipated or absorbed, they acquire a greater consistence. In this condition they present a round or oval figure, and have their texture easily broken. These bodies may be disseminated through the substance of the lungs, or they may be agglomerated in masses occupying one or more lobules. On one occasion he found what he considered as the matter of tubercles contained in the pulmonary vesicles, in which the minute ramifications of the bronchia terminate.

The formation of tubercles being explained as the product of a secretory process, he next inquires whether this secretion is the result of a new and adventitious tissue, or whether it may not take place in any tissue susceptible of inflammation and suppuration. He is the advocate of the latter opinion, and in support of it he adduces several observations, tending to show that the matter may be generated in the mucous membrane lining the bronchia and pulmonary vesicles, and that it may also be secreted in the cellular tissue which forms the bond of union between the various parts constituting the parenchyma of the lungs. He is disposed likewise to admit the occasional existence of tubercles in the lymphatic system belonging to the lungs.

Wherever the secretory process is rendered more active, a more abundant supply of blood will be established, or congestion will take place. In the normal conversion of cartilage into bone, the deposition of osseous matter is preceded and accompanied by an increased capacity of the vessels belonging to the part, so as to admit a current of red blood. The formation of adventitious membranes, and the production of new growths, are accompanied by similar phenomena. In the latter, the products are the effect of a certain chain of morbid actions, to which the term of inflammation has been assigned. If then a tubercle is the product of secretion,—if it is a new formed part in the midst of a particular organ, Dr Andral thinks that all the known phenomena lead to the conclusion,

that the appearance of the tubercles must be preceded by an active congestion of fluids in the affected organ. Still, however, he does not consider such congestion as constituting real inflammation. According to him, it is a pathological condition, connected with a particular disposition in the part leading to the formation of pus, adventitious membranes and tubercles, according to the nature of that disposition. If the specific disposition is strongly marked, then the slightest congestion will suffice for the formation of the morbid product, wherever this congestion is established. Under such circumstances the appearance of tubercles has been referred to a particular diathesis. When this diathesis is less strongly marked, a more active congestion, amounting to inflammation, must precede the formation of tubercles. But should it not prevail, then the most intense and long continued inflammation would be insufficient to their production.

The granulations noticed by Bayle, and considered by Laennec as incipient tubercles, have, in the opinion of Dr Andral, a totally distinct character. According to him they are the result of the inflammation and induration of the pulmonary vesicles, while the interstitial cellular tissue remains perfectly sound. The artificial division, or tearing of the lobules, occasions these inflamed vesicles to appear in the form of red or grey granulations, distributed through the parenchyma of the lungs.

The symptoms of pulmonary phthisis are divided by our author into those which indicate the first approaches of the disease, and into those which are observed in its more advanced period.

The general inadequacy of all our therapeutic measures to exert any positive control over pulmonary tubercles when once completely developed, has been often acknowledged by the profession. The triumphs obtained over the disease have been few and questionable, and the insanability of consumption has become almost proverbial. We turn, therefore, our attention to the studying of the incipient or forming stage of the disease, as affording the fairest hopes of warding off the fatal consequences of this dreadful malady.

According to Dr Andral, before the signs which indicate the existence of pulmonary tubercles are noticed, one of the

following morbid conditions may be generally observed:—1. A simple inflammation of the mucous membrane lining the air passages. 2. One or more attacks of hœmoptoe. 3. An inflammation of the parenchyma of the lungs, or of the pleura.

The inflammation of the mucous membrane, which precedes the formation of tubercles, is not uniformly located in the bronchia, but may be observed to commence at the superior extremity of the tube leading to the lungs, and to be accompanied by the symptoms of simple laryngitis. Hoarseness, sense of stricture and uneasiness, rather than pain, first referred to the larynx, then successively down the trachea, attended by pricking and soreness behind the sternum, some uneasiness in swallowing, frequent harassing fits of coughing, are noticed as the symptoms denoting this particular form of disease. These symptoms persisting for some time, there will supervene disturbance in the circulation, emaciation, and all the ordinary indications of pulmonary consumption.

In some individuals, after the continuance of simple bronchitis, either badly treated, "or resisting the most appropriate means," the respiration becomes embarrassed, a slight fever is observed, emaciation takes place, and the existence of tubercles in the lungs remains no longer doubtful. This disposition to the development of tubercles appears to be connected with a scrofulous habit, with a residence in cold moist places, and with the habitual omission of exercise in the open air. Instances, however, do occasionally present of individuals who have recovered from repeated attacks of bronchitis without exhibiting, on these occasions, the slightest disposition to phthisis, they being cut off by the disease at an advanced period of life; and in such persons, after death, tubercles have been detected in the lungs.

In the latter cases Dr A. thinks that the tubercles must be considered as the product of previous inflammation. In those individuals who are prone to repeated bronchitis, and whose recovery has been protracted and accompanied by considerable irritation of the system, a question arises, whether these attacks of bronchitis have not been favoured by the presence of tubercles already existing in the lungs. The argument employed by him in support of the universal agency of inflam-

mation in the production of tubercles, is founded on the absolute impossibility of our adducing cases of tubercles in persons who had not previously been observed to suffer from inflammation in some portion of the lungs. We acknowledge ourselves unprepared either to maintain or to impugn the doctrine advanced by the author, and have therefore thought it our duty to present it free from comment.

Spitting of blood may be observed in different periods of pulmonary consumption, but the sanguineous discharge that will now occupy our attention is that which marks the first appearance of phthisis. Hemoptysis is often symptomatic of the existence of tubercles, but here it seems to precede their formation. Hence Dr A. notices the propriety of designating this particular species by the appellation of *phthisis ab hæmoptoe* introduced by Morton.

Our author relates that many of the consumptive patients whose cases he has recorded, stated that they had always enjoyed good health, that their constitution was strong, and that they did not cough before the attack of hemoptysis. Suddenly, while in perfect health, they were seized with a copious spitting of blood; this having gradually ceased, they still continued to cough, and by degrees all the symptoms of phthisis were developed. In other instances we are informed that it was not until after repeated attacks of hœmoptoe, and without any appearance of catarrh, that the cough was observed to continue, and that the patient became affected with phthisis. The congestion attendant on hemoptysis is considered by him as tending to the production of pulmonary tubercles.

Phthisis is often observed to come on after a pleuro-pneumonia. Here our author establishes two important distinctions. In one class the existence of tubercles has been announced previous to the invasion of the peripneumony, but being few in number and not far advanced, the tubercles are not accompanied by severe symptoms. An habitual cough, slight oppression in the breathing, and a decline of flesh, might render their existence suspected, but the patients are not confined to the house, and are still capable of pursuing their ordinary occupations. Under these circumstances, the inflammation of the pulmonary parenchyma exerting a fatal

influence, occasions a multiplication and softening of the tubercles, terminating in phthisis.

In the other class the patients are of robust frame, and exhibit not the slightest appearance of the previous existence of tubercles. After the attack of peripneumony they do not recover their strength and flesh; they continue to be afflicted with cough, either dry or accompanied by a catarrhal expectoration. Full inspiration is difficult, and the patient complains of shortness of breath. Nevertheless the dull sound on percussion disappears, and the respiratory sound becomes natural. In other instances the pneumonia may pass to the chronic state. On percussion the thorax continues to emit a dull sound, the natural respiratory sound is wanting, or is supplanted by various morbid rattles. In this class of consumption the production of tubercles is considered by Dr A. as resulting from an obvious inflammatory action. These facts are adduced by him in support of the universally inflammatory origin of these adventitious bodies.

Occasionally phthisis follows in the train of diseases in which the respiratory system is not immediately interested. The first indications of this disease are extremely obscure, and its approach perhaps not at all apprehended, until it is developed in its most aggravated form. According to our author, simple bronchitis, hemoptysis, or a slight peripneumony has generally been observed to precede the attack of phthisis. It is in this way he explains its appearance during the convalescence from gastro-enteritis; and he insists on the advantage to be derived from a strict adherence to the antiphlogistic plan of treatment. In many cases, however, where depressing moral causes were operating, and where a grateful and nutritious diet was withheld from persons, perhaps of a delicate constitution, but previously in good health, we have seen, after the prevalence of symptoms considered as dyspeptic, the full and rapid development of pulmonary consumption. Such cases, and the observations recorded by Barron on the authority of Jenner, have made us rather hesitate in adopting to its full extent the doctrine maintained by Dr Andral.

Among the exanthemata, measles is remarkable for the frequency with which it is succeeded by phthisis. Here the explanation is obvious, for throughout the progress of measles,

the bronchia are known to be the seat of very active inflammation.

In the course of a variety of chronic diseases it often happens that the appearance of tubercles is gradually manifested. The precise period when they begin to be developed cannot easily be determined, for at first, the symptoms may be referred to a simple cough, and the wasting which is observed may be readily ascribed to the preceding chronic affection.

Taking all these circumstances into consideration, the incipient stage of phthisis will present very dissimilar aspects in different individuals. In this stage, a correct diagnosis can only result from a very close and critical observation of all the clinical phenomena; and to attain this object the practitioner must avail himself of every possible means of duly appreciating the various symptoms. We shall therefore endeavour to present to our readers a succinct view of those described by Dr Andral, as characteristic of the disease.

Percussion of the thorax is far from affording the same degree of information in different individuals affected with pulmonary tubercles. These bodies, existing either in the crude or softened state, may give rise to all the symptoms of confirmed phthisis in the second or third stage, and yet percussion of the thorax shall present no alteration of sound. We are informed that this perfect sonorousness of the chest, in phthisical persons, is to be ascribed to the healthy condition of the parenchyma surrounding the tubercles.

In some instances the sound emitted on percussion is greatly increased. The increased sonorousness may result from the melting down of the tubercles, and the air passing freely through the communicating bronchia. Or it may be owing to the dilatation of the pulmonary vesicles producing an emphysema of the lungs. In the former instance, the increased sonorousness is partial, and is most generally observed between the clavicle and the breast. It may be perceived in the axilla, and in the space above the spine of the scapula, rarely in the space below. On these occasions the inequality of sound emitted from the two sides of the chest, united with other symptoms, will indicate the particular nature of the disease. Where there is extreme emaciation, the sound emitted by percussion will be louder than natural.

Diminution of sound is observable: 1st. When the tubercles are greatly multiplied and closely aggregated in one mass. 2d. When the parenchyma surrounding the tubercles is inflamed and indurated. 3d. When fluid is collected in the cavity of the pleura. The diminished sound resulting from the first cause, is less frequent than from the second. The tingling sound noticed by D. Martinet, Revue Medicale, 1825, as proceeding from a cavity containing at the same time air and a fluid, has been observed by Dr Andral only thrice, and then he was unable to determine the condition which led to the production of this peculiar sound. Sometimes the simple application of the hand enabled him to ascertain the precise seat of the cavity; a peculiar vibration being imparted to the fingers and palm of the hand whilst the patient was engaged in speaking.

The indications of the various diseases of the lungs, afforded by means of the stethoscope, are more numerous than can be conveyed to the ear by percussion. Yet the information derived through the medium of that instrument is not infallible.

The existence of tubercles in the lungs may be announced by different modifications of the respiratory sound, by the different kinds of rattle, and by the peculiar resonance of the voice perceived in different parts of the chest. Dr Andral has, however, acknowledged, that he has met with cases of confirmed consumption, in which no pectoriloquence, no alteration in the respiratory sound, could be perceived, except that species of rattle which belongs to simple catarrh.

The diminution or absence of the respiratory sound was explained in the last number of the Journal, as the result of an infarction or obstruction of the pulmonary vesicles, whereby the air is prevented from entering certain portions of the lungs. The presence of tubercles will often produce a similar effect, and their particular location may thus be frequently determined.

The increased intensity of the respiratory sound, occasionally observed in persons affected with phthisis, is to be explained by the augmented capacity of the pulmonary vesicles, sometimes even surrounding tubercles that are fully developed.

In consumptive persons, other modifications of the respiratory sound are frequently observed. At each inspiration the

ear perceives the sound of air penetrating the bronchia, without any addition of rattle. The air may be considered as not reaching the pulmonary vesicles. This peculiar sound, denominated by our author bronchial, indicates the mere impenetrability of the pulmonary tissue, and affords no clear intimation of the presence of tubercles. When a cavity is formed in the lungs, having a communication with a large bronchial tube, and containing but little pus, the free entrance of the air will produce a peculiar sound, that cannot easily be mistaken. This sound has received the appellation of cavernous. The mere dilatation of a bronchial tube may occasion an analogous sound, but never possessing the same degree of intensity.

These several sounds, whether vesicular, bronchial, or cavernous, may be blended with, or completely lost in, various species of rattle, resulting from the mingling of air with the fluids contained in the bronchia, or in the tubercular cavities. But in the estimation of Dr Andral, none of these rattles can be considered as pathognomonic of pulmonary consumption.

The peculiar resonance of the voice, denominated pectoriloquy, is another sign, furnished by the stethoscope, indicating the existence of pulmonary consumption. But its absence does not afford conclusive evidence that there are no tubercular excavations in the lungs. It is stated to be more intense when these excavations are severed by a condensed parenchyma, and when they are seated near the periphery of the lungs.

A shortness of breath is a frequent attendant on phthisis; yet cases do occur, in which this is not noticed by the patients. When existing, it is often increased after taking a hearty meal; and in phthisical females, it is often observable at the menstrual periods. A sudden aggravation of the dyspnœa appearing, there is reason to apprehend active inflammation of the parenchyma surrounding the tubercles. Its influence on the treatment is too obvious to be insisted on.

The immobility of one side of the thorax, when a large quantity of fluid is collected in that side, has been frequently observed. But Dr Andral notices a more remarkable phenomenon, the partial immobility of one side, occasionally observed in persons affected with phthisis. He found it, connected with a chronic inflammation of the parenchyma sur-

rounding collections of tubercles alike, whether crude or excavated.

Many have sought, in the character of the cough, for the diagnosis between simple bronchitis and the affection resulting from the formation of pulmonary tubercles. This view is in some degree confirmed by clinical observation, for in incipient phthisis, while the tubercles in the parenchyma are few, and not suppurating, there is a dry hacking cough, and the irritation is referred by the patient to the larynx. After ceasing for some time, this dry cough is more liable to relapse in persons affected with tubercles, than is generally noticed in cases of simple bronchitis. Dr Andral has, however, recorded some cases where the patient was entirely free from cough, and yet after death tubercles were found in the lungs. In the advanced stage of phthisis, the cough is accompanied by an abundant expectoration, and the matter thus thrown up has been made the subject of frequent and critical examination, in the hope of establishing a clearer diagnosis; but, as far as experience can warrant, with very little success. Dr Andral very justly remarks, that in every case of phthisis, the mucous lining of the bronchia must be more or less affected, and consequently, that a considerable portion of the sputa must present the phenomena characterising simple bronchitis, mixed at times with a white grumous matter, resulting from the breaking down of the tubercles. All the instances of the expectoration of calculous concretions that came under his notice, were in young persons. The fact is curious, and accords with our own experience.

The odour of the sputa is generally mawkish, occasionally nauseous, and in a few instances fetid; but these circumstances afford no criterion of the existence of tubercles in the lungs.

The frequent connexion between hæmoptysis and the actual or future existence of pulmonary tubercles, has been established by repeated observation. The blood expectorated may be exhaled from the mucous membrane lining the bronchia—*bronchio-hæmorrhagia.* It may be poured out in consequence of the rupture of the minute branches of the pulmonary arteries or veins, constituting *pneumo-hæmorrhagia, apoplexia pulmonalis* of Laennec. Or it may be found issuing from an ex-

cavated tubercle. Only in one instance was Dr Andral able to detect a vessel of any size, from which the blood was poured out. Having pointed out the sources from which the blood may be derived, he mentions as his experience, that tubercles were not present in only one-fifth of those affected with hæmoptysis. That in persons who died of phthisis, one-sixth had never expectorated blood, that in one-half the spitting of blood occurred when the existence of tubercles was no longer doubtful, and that in the remaining two-sixths, or one-third, the hæmoptysis appeared to precede the formation of the tubercles.

The hectic fever of pulmonary consumption has been fully described by medical writers, and having nothing to add to the history, our author passes it by without any farther notice.

On the examination of the bodies of those who have died of phthisis, besides the tubercles in the lungs, other lesions are frequently observed. These traces of morbid impressions, whether acute or chronic, may be manifest in different portions of the respiratory system, or in organs having no immediate connexion with the lungs.

We are informed, that in three-fourths of the consumptive patients, under the care of Dr Lermenier, the larynx was more or less affected. Of the various tissues which enter into its composition, the mucous membrane lining the internal surface presented the most frequent lesions. And in the majority of cases, the other tissues were only secondarily affected. The morbid changes observed, were simple redness, softening, increased thickness, fungous excrescences and ulcerations.

Simple redness, with slight thickening of the mucous membrane, covering the vocal chords, or lining the ventricles, produces a change in the tone of the voice.

The change of the voice produced by ulceration of the mucous membrane, is often no greater than what is observed in cases of simple inflammation, and seems to be occasioned, 1st, by the accumulation of pus and mucus in the ventricles; 2d, by the lesion, and want of elasticity in the thyro-arytenoid ligaments, occasioned by the removal of the mucous membrane. Ulcerations in other parts of the mucous membrane do not materially affect the voice. Tumours in the ventricles render the voice hoarse and grating. A general tumefaction of the

mucous membrane produces the same effect. Complete aphony follows the destruction of the thyro-arytenoid ligaments. The extinction of the voice likewise accompanies the lesion of the thyro-arytenoid muscles. We are, however, reminded, that various modifications of the voice, in force and tone, may result from mere nervous influence, without any pathological alteration of structure.

The lesions in the pulmonary parenchyma surrounding the tubercles are very frequent, and often fraught with more imminent danger than the tubercles themselves. It has already been stated, that in many instances the tubercles succeed an acute inflammation of the lungs. This inflammation may be dissipated, and in the dead body tubercles may afford the only evidence of its previous existence. But in the progress of phthisis, pneumonic inflammation may occasionally present, and these intercurrent affections hasten the fatal termination.

The lesions observed in the pleura of consumptive persons have been adhesions of various kinds; and in these adhesions, or on the surface of the pleura, tubercles have been occasionally discovered.

Effusions or collections of fluid have been noticed in the cavities of the pleura.

In the various lesions enumerated may be found a ready solution of many of the phenomena observed during the progress of consumption.

Enlargement and suppuration of the bronchial lymphatic glands are frequent in children and rare in adults. These morbid changes are not announced by any particular symptoms. Perhaps the pressure of an enlarged gland may obstruct the free passage of air through the bronchia, and occasion dyspnœa, and even some modification of the voice.

Dr Andral states that in two-thirds of those who died of consumption, the heart was more or less affected. As a caution in the diagnosis, he mentions that in consumptive persons the pulsations of the heart are often very forcible and extensive without any hypertrophy of that organ.

The frequency of affections of the alimentary canal, in consumptive persons, may be easily demonstrated by attention to the symptoms and by the examination of the dead body.

According to the observations of Dr Andral, in three-fifths

of those who died of consumption, under the care of Lermenier, decided marks of disease were found in the stomach. In many the mucous membrane was highly injected, either in an arborescent form, in dots, or in large blotches. In others the membrane had acquired a brown or slate colour, retaining its natural thickness and consistence, or having become thickened and indurated. On other occasions, and still more frequently, the membrane was softened and reduced to a pulp. Ulcerations of the mucous coat were rare. The other coats for the most part remained untouched: though occasionally a remarkable thinness of all the coats was observed. Corresponding morbid changes were observed in the intestinal canal, and only one-fifth of the persons carried off by consumption presented a sound state of the canal, extending from the duodenum to the termination of the rectum. He has devoted more than fifty pages to prove the inflammatory character of many of the morbid changes observed in the alimentary canal of persons who have died consumptive.

An acute gastritis may precede the symptoms which indicate phthisis; more frequently it is observed after the existence of pulmonary tubercles has been fully developed. On many occasions it hastens the fatal termination, and must therefore engage the particular attention of the medical practitioner.

The chronic inflammation of the stomach is of more frequent occurrence, and becomes complicated with phthisis in the more advanced periods of this disease.

According to Dr Andral, the affections of the intestinal canal have been more duly appreciated, and more correctly described. That the irritation of the intestines becomes vicarious, and frequently relieves the cough and the night sweats, is a familiar observation.

From the scrofulous character of phthisis, and from the prevalence of intestinal irritation during the progress of the disease, we naturally look for the morbid appearance of the mesenteric glands, so generally observed in persons who have died of consumption.

Among the morbid changes of the liver, he notices its degeneration into a kind of fatty matter as having been observed in one-third of the cases of phthisis under the care of Dr

Lermenier. The tuberculated condition of this viscus has been more frequently observed in children than in adults: in the latter he states it as one in fifty.

The appearance of tubercles in the kidneys and in the brain is mentioned as having been occasionally observed in the bodies of consumptive persons after death.

Having presented the principal morbid changes noticed by our author, as connected with phthisis, we believe we shall not withhold any important information if we now close the article. The observations on pleurisy, which complete the series contained in these volumes, may, perhaps, form the subject of a future notice.

Art. IV.—GROSS ON THE BONES AND JOINTS.

The Anatomy, Physiology, and Diseases of the Bones and Joints. By Samuel D. Gross, M.D. *Philadelphia. John Grigg.* 1830.

It has been said that the American medical public, separated by a wide expanse of ocean from the remainder of the profession, and placed beyond the influence of national jealousy or personal rivalry, may review the merits of European authors and European practice with all the coolness and candour of posterity. By adopting whatever will endure a rigid examination, and by rejecting what may be received in particular schools from the influence of national prejudice or local authority, we should be able to prosecute our researches under fewer disadvantages in some respects than our fellow labourers beyond the water. If, with the treasures of transatlantic wisdom poured into our lap from every quarter; if, with all the ardour and activity of scientific youth upon our side, we fail to increase the stores of medical knowledge, the greater condemnation should be ours.

Among the drawbacks to our success in the practice of

medicine, and more especially in surgery, we may rank that habitual confidence in our own resources, which results from the condition of society in a new country, where the sparsity of population precludes the minute division of labour; where every man is obliged to devote his attention to a variety of pursuits, among which there is little accordance.

Too many amongst us are contented with picking up a few general principles, trusting with perfect self-confidence in our ability to adapt the means to the end in all the details of practice; and perhaps there is no other country in which so many attempt to reach the high places of professional distinction by the "royal road."

But if the originality of thought and freedom of opinion, arising from such a state of things, may occasionally cast an unexpected light upon an obscure point, or introduce a valuable practical improvement—the unfortunate neglect or contempt with which it leads us to treat the labour of others, is the cause of errors infinitely more important. We suspect that in the profession of medicine, Genius will find a fearful balance against him in the last account.

These remarks apply with greater force to the state of the profession in the places most distant from our great medical schools. In our larger cities, we find profound research and erudition, combined with the proverbial shrewdness of the American character, productive of consequences which we forbear to describe, lest we should be taxed ourselves with another of our national failings—vanity.

There is no department of surgery which has received more considerable improvements from the professors and practitioners of this city, than the treatment of fractures and analogous injuries. For many years that which was considered as impossible by some of the highest surgical authorities of Great Britain, was so constantly effected in Philadelphia, that a case of simple fracture of the femur, discharged with perceptible shortening of the limb, was felt as a disgrace by the surgeon! And we may fearlessly appeal to any physiologist who is well acquainted with the direction and resolution of forces, to decide between the comparative merits of the beautifully simple dressings now employed in this school for all the varieties of

fractures, and the most perfect machines of the French, —the acknowledged masters in European surgery.

Yet we know, from actual observation, that many practitioners in various parts of our country are, in a great degree, ignorant of the management of these machines—and some of them may also be found who still advocate the use of short splints in fractures of the thigh! How shall we account for this? We think it chiefly referrible to the imperfection of our text books and home works, from which the few first principles of surgery are derived, and the inability or disinclination of most of the profession at a distance from cities to advance beyond them in pursuit of information.

Where shall we find an American work on fractures, in which even a moiety of the species of these accidents are described?

It is impossible to treat of the real nature and the proper treatment of the mechanical injuries of the skeleton, in that distinct and clear manner necessary, in an elementary work, designed for students and members of the profession removed from the grand theatres of surgical practice, without premising in each form of accident a succinct account of the anatomy and physiology of the parts interested;—yet where do you find this method pursued?

The treatise of Sir Astley Cooper upon fractures and dislocations makes a nearer approach to our beau-ideal, in its arrangement, than any other work of the kind in the English language. But even in its American dress, with all the aid of notes and additions, it is very ill adapted to the present state of surgery on this side of the Atlantic; and a good work upon the mechanical injuries of the bones and their appendages, accommodated to the practice of American surgeons, may still be regarded as a desideratum.

The work of which the title is placed at the head of this article, is not confined to the consideration of the mechanical injuries of the bones. It professes to embrace the whole field of the diseases and accidents of the osseous tissue and of the joints, with so much of the anatomy and physiology of the parts interested as is necessary to the proper comprehension of these subjects.

In a volume of three hundred and eighty pages, covering

such a variety of subjects, we could not expect any great degree of profundity. "The work," says the author, "contains little, if any thing, that is either new or unknown—it is strictly elementary, and is designed expressly for the use of students and junior practitioners."

It is avowedly a compilation, intended as a vade-mecum, and should not, therefore, be criticised with that strictness that the pretensions of its title page might incline us to employ. We shall confine ourselves pretty much to a short analysis of its contents, with occasional comments upon the degree of skill with which the labour of compilation has been performed.

The first chapter is devoted to the general anatomy of the bones, and contains, in its first section, not only the description of the external appearance, the various chemical analyses and the obvious mechanical arrangement of the substance of bones, but also a very brief account of the various views of anatomists, from the days of Haller and Dethleeff to those of Howship and Scarpa, upon the intimate structure of the osseous tissue, with a short sub-section upon the formation of bone. On the first of these subjects the compiler's opinions may be inferred from the following sentence:

"The osseous texture is nothing but a kind of cellular tissue, which retains the interior form of its primitive state until the fat is deposited into its cells, when it becomes gradually hardened by its union with a gelatino-calcareous substance." P. 6.

He combats the opinion of Scarpa, that bone, deprived of its earthy matter is entirely composed of a cellulo-reticular structure. "These views," says he, "are probably correct as far as regards the original condition and ultimate analysis of bone, but they are unquestionably erroneous in reference to the state of the osseous tissue when merely deprived of its earthy matter." P. 8. Yet in speaking of the effects of maceration upon the fibres of the matter of bone deprived of earthy portions, he says, "by continuing this process the fibres will gradually become soft and swollen, and at length exhibit an areolar texture similar to the cellular tissue of the soft parts."

Now if we venture to accuse the author of some slight inconsistency in these passages, we would wish to be under-

stood as holding the compiler in a great degree blameless. From what work or works, with the exception of that of Scarpar, could he extract an account of the intimate structure of bone without inconsistencies equally glaring?

For our own part, we can see nothing properly described as a table or a fibre in the bony skeleton. In the flat and short bones, all are ready to admit that such terms are less applicable than in the long bones. What part of the latter class of organs presents a tabular or fibrous structure, properly so called? Is it the cartilage which gives shape to the organ previous to the calcareous deposition? We believe that few have attempted to establish this point, and even if it were possible, this provisionary matter is not bone. Mr Howship has clearly proved that it is removed entirely before the formation of proper bone; thus displaying its true character as an interstitial deposit, and disproving in the clearest manner the rude hypothesis of a gradual hardening from mucus to cartilage and from cartilage to bone.

Again; is it in the calcareous deposit that we observe this tabular and fibrous arrangement? Let us make an unprejudiced examination of the condition of a long bone which has been subjected to destructive distillation.

We find the middle of the shaft, perforated in a direction nearly longitudinal by many irregular foramina, terminate directly or indirectly in the surface at one extremity, and in the medullary canal at the other. These foramina are much more numerous and more enlarged in certain places, and communicate so freely in all directions as to produce a reticulated appearance. If the destruction of the animal matter is incomplete, the bone gives way in these spots most readily, and a tabular fragment is the result; while the track of the more minute foramina gives to the substance the appearance of fibres. But if the bone has been subjected to heat sufficient to destroy totally the animal matter, it is reduced to a mere congeries of scarcely adherent particles, crumbling with equal ease in all directions. This proves that when the connecting medium is removed, the particles of the calcareous deposit are isolated, and incapable of forming either a table or a continuous fibre.

Are we then to search for this structure in the cartilaginous deposit? We find it admitted in the work before us, that after

the removal of the earthy matter by an acid, the apparently homogeneous mass which remains may be reduced, by long maceration in pure water, to an "areolar texture, similar to the cellular tissue of the soft parts." What is removed by the maceration? Assuredly certain interstitial parts. The remaining cellular matter is evidently the nidus of both the cartilaginous and the earthy deposits. Now we may safely put the question, whether it is possible so to arrange any species of matter within a mass of pre-existing cellular tissue, as to produce either continuous tables or fibres.

We must beg to be excused for dwelling a little on this topic, because it is intimately connected with the old hypothesis of the gradual hardening of bone, which has tended, and unfortunately still tends, to obscure the pathology of the osseous tissue. It is high time that the rude mechanical doctrines of which we have been speaking, should cease to influence the profession. The nails of Havers and the rings of Duhammel belong only to the history of surgery, and it is a matter of astonishment that they should still appear, even in a modified form, in the writings of Breschet and Dupuytren.

After what has been said, our readers will judge with what reservations we admit the account given by our author of the opinion of modern anatomists, "that ossification results from a change of nutrition in the cellular structure of the temporary cartilage, in consequence of an increased flow of blood, and that by virtue of this change the albuminous homogeneous substance of the cartilage is converted into a lamellated, gelatino-calcareous tissue." A longitudinal section of any long bone presents us with a view of the cellular structure of the extremities gradually concentrated into the solid texture of the shaft; these two portions standing in much the same relation to each other that fascia bears to ordinary cellular membrane.

The succeeding sections of the first chapter treat in a brief but perspicuous manner of the general anatomy of the different classes of bones and of their internal and external appendages.

The second chapter ushers us at once into matters of interest, more directly practical. Its first section embraces a general view of simple fractures, complicated fractures, and the formation of callus; and these subjects are treated in as clear a man-

ner as the slender allotment of eighteen pages will allow. We shall pass this section with a very few remarks upon some points of importance.

"It was formerly supposed by surgeons that pregnancy always retarded or prevented the union of fractures, and the opinion was supported with considerable warmth even by writers of respectability. It must be remarked, however, that such assertions are altogether gratuitous, and have been amply refuted," &c. P. 39.

Dr Gross, however, admits that difficulty from this condition does sometimes occur, but denies that it takes place as a "general rule." We have had occasion to observe an obvious retardation of the union of fracture during pregnancy; and indeed the process is one of so great difficulty, that any considerable irritation in a distant part, such as an erysipelatous inflammation, an irritable ulcer, &c. may not only retard it, but may even occasion pseudarthrosis, as we have several times witnessed. The like result is known to occur from the debility consequent upon a previous attack of fever, or from the too long continuance of an antiphlogistic regimen after the accident: why should not the like effects follow from pregnancy? We would caution the young practitioner (the authority of some great names to the contrary notwithstanding), that there is real danger to be feared from this source, and that prudence requires the lancet to be used only with great caution in the first stage, and the prompt administration of an invigorating diet in the second stage of fracture, occurring during gestation. But it should always be borne in mind, that where the accident is attended with injuries of the pelvic viscera, from contusion or concussion, or when it is followed by high febrile excitement, no dread of pseudarthrosis should induce the physician to run the risk of more serious dangers.

"In some circumstances, especially in fractures of the lower jaw, and in very young children, considerable advantage may be derived from splints made of common pasteboard; but in most other cases they are too thin and flexible to give any support to a fractured bone. Before applying them, they should always be carefully moistened, so that when they become dry, they shall have the exact shape of the part, and form every where a firm and solid covering, without incommoding the patient." P. 44.

We are pleased with the general disapprobation of pasteboard splints, expressed in this paragraph; but we must be permitted to carry our opposition to them even farther than our author. We will not at present consider the question of their application in the fractures of very young children. This practice is sanctioned by high surgical authority in this city, in the case of fracture of the os femoris in infants; and it is equally defensible in the fractures of the leg or os humeri in very young patients. In some fractures of a complicated character, in the immediate neighbourhood of joints, and in certain fractures of the condyles of the os humeri, we have even had occasion to resort to it ourselves; but we are compelled, having witnessed the ill effects of pasteboard splints in numerous instances, to enter our solemn protest against their employment as a retentive apparatus in any simple fracture, except those just specified. The strong ground of our objection, in addition to those mentioned by Dr Gross, is, that it is impossible in almost every case for the surgeon to assure himself of the co-aptation of all the fragments during the time that the pasteboard envelope is becoming dry and fixed. If the slightest deformity should occur during the time in which the splint remains plastic, it adapts itself exactly to the form of the displacement. The surgeon may then examine the patient frequently, and replace the fragments with the greatest care, but without advantage; for on the reapplication of the dressings the malformed splint instantly renews the displacement. The same objection holds against the plan proposed by Cowper, and resuscitated by Larrey; that of encasing the limb in compresses and other dressings, hardened by glue or albumen, a plan which we were sorry to see lauded by an American surgeon. If any parallel mode of treatment could be considered less objectionable, preference must certainly be given to the Arabian method of surrounding the limb with plaster of Paris, which hardens with great promptitude; but the one grand objection just urged precludes the necessity of considering many other important evils which such plans are likely to produce.

We cannot take leave of this section without expressing our satisfaction with our author's observations upon amputation after complicated fractures. Whatever may be the pride of

skill, or the more generous self-approbation of the surgeon in saving a limb in a condition almost desperate, we cannot but lament the great sacrifice of life and health which we have witnessed from such attempts. Certainly the loss of a member to a man in the prime of life is a less serious misfortune than the ruin of a constitution by years or even months of confinement, endured under the double depression of the consciousness that life may finish the sacrifice, and that success itself may still leave him a cripple. In the desire to avoid the danger of operating, too frequently American surgeons are led into the opposite extreme.

The succeeding section embraces all the varieties of fracture. Those of each bone are preceded by a description of the bone, and an enumeration of the muscles which are attached to it. We confess ourselves surprised that the author should have entered so much into detail with regard to the osteology, and left almost untouched the more important subject of the action of the various muscles, and their effect in producing displacement. What advantage is the student to acquire from perusing a simple list of the muscles attached to a bone, without any notice of their origin, insertion or action, and without any attempt at classification? Will it enable him to comprehend the different species of displacement occurring in fractures of the lower jaw, for instance, when the solution of continuity occurs on one or on both sides of the chin, at the chin, in the rami, or in the neck of the bone? If it will not, why is the enumeration made at all?

In describing the fractures of any particular member, we look upon it as all important to explain the action of all the muscles which influence the motions of the part, and also the manner in which their action is modified by a rupture in any part of the length of the bone.

It is impossible to point out all the varieties of any particular fracture; and the only mode in which the surgeon can qualify himself for their treatment, is by acquiring an accurate knowledge of the mechanism of the parts interested.

We are aware that, in our popular treatises upon fractures, very little regard is paid to this mode of instruction; and if our surprise at this defect in the compilation before us should seem on this account unreasonable, we must urge in our ex-

cuse that it is difficult at once to relinquish the anticipations aroused by the title of the work.

It would carry us far beyond the limits of this review to enter into any discussion of the numerous debateable points that attract our attention in passing over this part of the treatise before us. We shall confine ourselves chiefly to some little notice of the more important omissions which strike us as we advance, in the hope that if the work should go through another edition, some of them may be supplied.

Fractures of the lower jaw. We are sorry to observe that in the treatment of these accidents, the beautiful bandage contrived by Dr John Rhea Barton, is not even noticed.

From having had considerable experience in this accident, we may safely assert that this bandage is much better adapted to all its varieties than any retentive apparatus previously in use. As the original paper of Dr Barton is not in the hands of most of the profession, and as we believe that the bandage is not exhibited in the lectures of either of our surgical professors, we may perhaps render a service to the profession by describing it in this place. Not having the paper of Dr B. at hand, we describe it as we have been in the habit of using it.

Take a roller of two fingers to two and a half in breadth, and the coaptation of the fracture being completed, apply the end of it under the parietal protuberance upon one side of the head; carry it obliquely forward, upward and inward, so as to cross above the junction of the coronal and sagittal sutures; descend along the temple and cheek on the opposite side, pass under the jaw and ascend again along the remaining cheek and temple, and across the first cast of the bandage near the junction of the sutures. Continue the roller so as to pass beneath the parietal protuberance opposite the place of beginning. Cross the mesial line beneath the occipital protuberance, pass beneath the ear, over the front of the chin, beneath the other ear, and, crossing the previous cast beneath the occipital protuberance, proceed to the place of beginning. Repeat this route three times, allowing each cast to overlap its predecessor in two-thirds or more of its breadth, and the bandage will be complete. It forms a triple triangle on each side of the head, and has four crossings, one on each side of the chin, one at the

junction of the coronal and saggital sutures, and one beneath the occipital protuberance. At each of these crossings it should be secured by a pin. On a well formed head this bandage may be applied so firmly as almost to prevent the possibility of moving the jaw.

In some patients, however, we cannot well employ it, because the parietal protuberance scarcely exists; we are then under the necessity of employing the bandage recommended at pages 62, 63.

The bandage of four tails secured to the nightcap should be discarded entirely. If it succeeds at all, it must be in fractures of the ramus, for it is impossible so to apply it as to give firm and steady support to the fragments.

Our objection to the moistened pasteboard has been already expressed in general terms, and we need not repeat it in this place with a more particular reference.

Fractures of the clavicle. Under this head we notice the omission of all distinction in the symptoms of fracture in the different parts of the bone. From the enumeration of the signs given in the work, we should infer that the marked symptoms observable in fracture of the body of the bone were equally observable in all other cases. Now there are two species of fracture of the clavicle mentioned by authors, in which the symptoms differ materially from the description, viz. oblique fracture with the outer fragment riding over the inner*, and fracture between the conoid ligament and the acromial articulation. The omission of the first is not surprising, as it is noticed by but few writers. But the fracture near the humeral extremity occurs more frequently, and has been so constantly described in the lectures of Dr Physick, the highest possible authority, where the treatment of fractures is concerned, that we are disappointed at finding no notice taken of it—particularly as it is often followed by very serious consequences, and, when the coraco-clavicular ligaments preserve their integrity, is detected with extreme difficulty. We should be glad to enter at length into the diagnosis and treat-

* We regret our inability at the moment to refer to our notes. We should have been glad to give a reference to an authority for this curious fracture, which has escaped our memory. We have seen this case but once.

ment of these accidents, but it would lead us into details too prolix and but little suited for this occasion.

We cannot take leave of fractures of the clavicle, without a few remarks upon the apparatus recommended in the treatment.

In the practice of the Pennsylvania Hospital, which is perhaps the highest school of surgery in the country, we believe that the apparatus of Dessault has undergone some slight but at the same time important modifications.* The compresses about the injured bone are omitted, leaving the part open to inspection. The pad is in part supported by a cast of bandage pinned to it at each end, and passing over the sound shoulder; the turns of the first roller which envelope this shoulder being discarded. The second roller, instead of ascending from the axilla on the injured side to the upper part of the shoulder, is made to pass directly across the middle of the arm, and to descend thence to the elbow by successive turns, leaving the superior part of the limb free, in order that no force may be applied to prevent the shoulder from being carried outward.

The principal practical difference between the apparatus of Dessault and Brown is, that the former supports the elbow chiefly by those turns which cross the injured shoulder, while the latter throws the burthen on the sound shoulder. This gives an obvious advantage to Dessault's dressing when the fracture is near the humeral extremity; but in fracture near the sternum, it is certainly an awkward contrivance. Is it lawful to attempt to raise the outer fragment by a bandage resting chiefly upon that fragment?—Surely not! In this case the apparatus of Brown is decidedly preferable.

It seems to be generally admitted, that no apparatus hitherto invented will enable the surgeon to treat a fracture of the clavicle without deformity; and unless the modification of the corset of Chapelle, by Dr Coates, should on farther trial realize the expectations of its author, we may consider a contrivance for the perfectly successful treatment of this accident as a desideratum in surgery. This apparatus has not yet been offered to the public.

* We say this subject to correction—our descriptions are drawn from the practice of that institution some years ago.

Fractures of the os innominatum. Under this head we will merely inquire why the very awkward contrivance of Sir James Earle, and the inconvenient substitute of Boyer, for giving the patient the opportunity of alvine evacuations, are lauded by the compiler, while the vastly preferable machines of Barton, Coates and Wistar (to say nothing of Jenks's alleviator) are passed by in silence. We can hardly suppose that they could have escaped his notice, either in his researches among the journals, or in his clinical observations at the hospital.

Fractures of both bones of the fore arm. The mode of reduction and dressing this class of accidents, is quoted from Gibson and Boyer. It would be scarcely proper in this place to enter into an examination of the merits of the apparatus recommended, as it is almost universally approved by surgeons of the present day: yet we cannot resist the desire to ask, why is a roller applied directly to the limb, in a fracture of the radius, the ulna, or of both combined? The greatest danger to the motions of the limb in such cases, results from the narrowing of the interosseous space, by the approximation of the fragments to the sound bone, or to each other. Now, if a roller is applied immediately to the limb, with any degree of tightness, it must aid in the production of this deformity. If it is not applied so firmly as to do mischief, we cannot comprehend how it can operate at all as a mean of retention.

Fracture of the body of the femur. The description of the apparatus of Dr Physick, which has been termed with sufficient modesty a modification of that of Dessault, is extracted from Dorsey's Surgery; and although the crutch-like extremity of the outer splint is now never seen in practice, and, if we are rightly informed, has been discarded for many years by its justly celebrated inventor,—it still figures in Dr Gross's work. Certainly the idea of employing pressure in the axilla, as a mean of counter-extension, had long been abandoned by American surgeons, until revived by Dr Gibson, in his modification of Hagedorn.

The double inclined plane, as modified by Mr Charles Bell, is mentioned, but without either praise or dispraise. It is hardly seen in this country—and we were somewhat surprised that the modifications of Boyer's splint by Dr Hartshorne,

which are frequently employed, should be entirely omitted, while an apparatus so seldom seen is regularly described. This is the more astonishing, because the work which contains the description of one of those contrivances is quoted by the compiler, under the head of fracture of the femur. We are compelled, therefore, to conclude that they do not meet with the approbation of Dr G. We are far from advocating the general employment of the modifications alluded to, for we disapprove in toto of screws, foot-boards, and socks, in any splint for the fractures before us, nor do we employ the older, and as we think preferable contrivance of Dr Hartshorne, in which these parts are wanting, except in certain cases of compound fracture. Here we should scarcely know how to dispense with it, as it enables us, by removing a portion of one or the other splint, to expose and dress the wound without disturbing the extension and counter-extension.

Whatever may be thought of the merits of these modifications, the very high source from which they emanate, will cause them to be extensively employed for a long time, and they certainly demand some notice from every American author who undertakes to treat practically on fractures of the femur.

We should be glad to enter into an examination of the other apparatus recommended by Dr G. in fractures of the femur; but we have laid ourselves open, perhaps, to some censure already, by undertaking to criticise the approved practice of the day, rather than the labours of the compiler. Be this as it may, it would require a vast deal more space than could be given to any essay in a quarterly journal, to canvass the debateable points in the treatment of this most important class of accidents. We will merely remark, that no bandage is applied immediately to the limb, in the practice of the Pennsylvania Hospital, unless in cases of unusual comminution, swelling, or extravasation.

Fractures of the Tibia. If we understand correctly the description of the dressing for this fracture, it is drawn from the splints employed by Sir A. Cooper. "Two wooden splints, long enough to extend from the knee to some distance below the ancle, and having each a foot-piece, are to be placed on each side of the leg," &c. page 144. These splints are more

difficult to obtain, and much more costly than the fracture box, with which every student in the University of Pennsylvania is or ought to be acquainted. The fracture box is applicable to almost every simple fracture of both bones of the leg, and still more so, to all simple fractures of the tibia, unconnected with the joints, and to all those of the fibula, except that for which Dupuytren has contrived a peculiar apparatus—yet it is no where mentioned in the work before us. The substitute of Dr Gibson is indeed recommended, under the head of fractures of both bones of the leg, but is not mentioned where it is most universally applicable—in the treatment of fractures of one bone only.

Fractures of the fibula. The seat and direction of fractures of the fibula are admitted by Dr Gross to be as various as those of any other bone: yet strange to say, he gives us only the treatment recommended by Dupuytren, for those fractures which are seated near the lower end of the bone. Is it meant that the internal splint and the wedge-shaped compress, intended by the author to reduce the consecutive dislocation attendant upon this accident, are likewise to be employed in fracture near or above the middle of the bone, in which no such dislocation takes place? If so, we feel assured that the practice will be followed but seldom. It cannot be denied, that such fractures would be managed by this plan of treatment with tolerable success, and a like success would probably attend upon the plan of allowing the limb to repose upon a pillow, without any splint or bandage; a little shortening, and some lateral displacement might indeed occur, although we should have doubted the possibility of the former, had we not seen it proved by post-mortem examination; but this deformity is not attended by any material injury to the limb, and we do not think that either of these methods will be attended with so little inconvenience to the patient, as would result from placing the limb in a common fracture box. We agree with Dr G. in thinking the apparatus of Sir A. Cooper more objectionable than that of Dupuytren, at least in fractures within three inches of the maleolus, and we are therefore still more at a loss to account for his recommending the former, in fractures of the tibia.

Fractures of both bones of the leg. It now only remains for

us to notice the recommendation of Hutchinson's splints, in cases of oblique fractures of this class, when attended by shortening of the limb. We are aware that these splints were highly recommended some years ago by the present professor of surgery in our school. Whether this continues to be the case we do not know; but they have long since been abandoned in the practice of the institution where they originated, in consequence of the serious difficulties occasioned by the interruption of the circulation produced by the pressure of the bandage, which secures the counter-extending tapes below the knee. Indeed, if the traditions of the institution are correct, they were in the end discarded by their talented but unfortunate author.

The cases of fracture of both bones of the leg requiring extension and counter-extension are rare, and when they do occur, we cannot hesitate in giving a decided preference to the use of Physick's modification of Dessault's splints, or Hartshorne's original modification of Boyer's over every other apparatus designed for the purpose.

The third chapter of the work treats of the diseases of the bones. It comprises sixty-three pages, and gives a general view of most of the diseases of the osseous tissue, with some observations on periostisis.

On this chapter we have scarcely a remark to offer. There is so little known, so little science in this department of surgery, that it is almost painful to dwell upon it. When the day arrives in which surgeons shall investigate the diseases of the various simple tissues which enter into the structure of bone; when the rude mechanical terminology still employed in this branch of their studies is forgotten; when the same acumen and untiring diligence which have recently thrown light upon the affections of almost every other organ are directed upon the morbid anatomy of bone; then, nor till then, can we cease to regard the diseases of the bones as the opprobria chirurgicorum.

In the first section of this chapter, which treats of caries, Dr Gross gives us an account of various operations for the excision of the extremities of the bones when carious. Much of this will be new and useful to those who have not the opportunity of referring to large libraries.

The references given at the close of each section of this chapter, will enable the inquisitive student to trace out most that is now known upon the subject, and to commence a career of inquiry that can scarcely fail, if steadily pursued, to produce something valuable to mankind and creditable to himself.

The second part contains a short chapter of nine pages upon the general anatomy of the joints; a second, sufficiently ample, upon the injuries, and a third upon the diseases of the joints. The second chapter is devoted almost entirely to dislocations, those of each joint being preceded by a concise description of the structure of the joint and of its ligaments. This is perhaps the best written part of the work, and we have but few remarks to make upon it.

Dislocation of the humerus downwards. We cannot pass over this subject without one practical observation on the proper position of the foot, in reducing this dislocation by placing the foot in the axilla. It is recommended by most surgeons to apply the heel directly against the head of the bone—probably under the impression that the lateral pressure produced by it would force the head of the bone toward the glenoid cavity: but if any one will duly consider the position of the parts, he will perceive that the pressure so directed tends in some degree to oppose the extension of the limb, and thus renders additional force necessary to restore the head of the bone to its proper place. We have always been in the habit of placing the patient on a mattress laid upon the floor, and allowing the limb to be carried out from the side, until it assumed the position most comfortable to the patient. We then placed the leg parallel with the arm of the patient, with the foot abducted as much as possible, and applied upon the side of the patient just below the head of the humerus, but in such a manner as to make as little pressure as possible upon it, the heel being placed considerably behind it. In this way we have reduced a dislocation with great ease, several days after its occurrence, in a very muscular man, and after it had resisted several very forcible attempts with the heel in the usual situation.

Dislocation of the fibulo-tibial articulation. The author remarks that he knows of no well authenticated case in which the inferior fibulo-tibial articulation was dislocated. We re-

member to have seen a case in which a fall upon the feet forced the astragalus against its socket in such a manner as to drive asunder the two malleoli. When the foot was pressed upwards the malleoli separated, but when it was drawn downward they resumed the proper relations. If we recollect right, the case was successfully treated by making lateral pressure upon the malleoli, the limb being placed in a fracture box. The patient was admitted into the Pennsylvania Hospital two or three years ago.

Of sprains. "The chief indications in the treatment of these injuries are, first, to arrest the hemorrhage from the lacerated vessels; secondly, to prevent the occurrence of severe inflammation; thirdly, to promote the absorption of the effused matter; and fourthly and lastly, to restore the motions of the injured parts," p. 339.

To fulfil these indications the treatment recommended is the application of twenty or thirty leeches over the seat of the injury; the relaxation of the muscles of the joint, and the elevation of the limb; in order to promote the flow of blood after leeching, immersion in warm water, or a warm solution of opium and acetate of lead. Nothing is said of the application of cold water, at once the most popular and most powerful remedy in the treatment of such injuries. We cannot see the propriety of applying leeches until inflammation supervenes; and the application of warmth and moisture conjoined, in the first moments of a sprain, is calculated to increase the extravasation and the determination of blood to the part. Immediate immersion in cold water, or what is still better, cold affusion, continued until numbness of the part is produced, followed by the application of a rag wet with cold laudanum or watery solution of opium, should, we think, precede the adoption of the treatment recommended by Dr Gross, which becomes very proper on the commencement of reaction in the part.

We shall offer no farther remarks upon the work before us, except to express that, with the exception of some inaccuracies of style, which now and then obscure the meaning of a sentence, it is highly creditable to the author, and contains as clear and concise an outline of the subjects treated of as could be demanded from one who compiles from the writings of others, avowedly without the aid of extensive practical experience.

The references display considerable research, and will be found useful to those who wish to investigate these subjects more fully.

We take leave of our author with the remark that praise unjustly bestowed is an injury to the deserving. He has been somewhat indiscriminate in his panegyrics upon some Europeans surgeons, and we might say, with almost the same degree of justice, that he had neglected some of our own.

It is malapropos to "teaze *mild* Baily and *soft* Abernethy" with compliments on the *suaviter in modo* which belong to the *fortiter in re.* In this respect we think Dr G. has sometimes done those things which he ought not to have done, and left undone those things which he ought to have done.

Art. V.—EBERLE'S PRACTICE OF MEDICINE.

A Treatise on the Practice of Medicine. In two volumes. By John Eberle, M.D. *Professor of Materia Medica and Obstetrics in Jefferson Medical College, Member of the American Philosophical Society, &c. &c.* 8*vo, pp.* 1078. *John Grigg. Philadelphia.*

To do justice to a work like the present in a concise review is scarcely possible. Even in restricting ourselves to an examination of the more important of the subjects upon which it treats, so many points worthy of comment present themselves, that, were we to enter fully into their consideration, our remarks would require more space than that afforded by an entire number of this Journal. And yet it is precisely one of those productions, a rigid examination of which is most demanded. Works of this class constitute an indispensable item in the libraries of a large portion of the profession, especially in the country; and from the frequency with which they are resorted to as books of reference, they cannot fail to exert a very pow-

erful influence over medical opinions and practice. It is important, therefore, that the systematic treatises placed in the hands of the profession should be such only as inculcate accurate views of the nature of disease, and the most approved plans for its treatment.

The work of Dr Eberle is confessedly one of very great merit. It does much credit to his industry and learning, while it places in a very favorable point of view his abilities as a practitioner. In addition to the results of his own experience, and whatever of importance was to be culled from the older writers, he has, in the majority of instances, availed himself fully of the facts and improvements for which our science is indebted to the investigations of contemporary physicians. He has not, it is true, always allowed to the latter the importance we conceive they merit, nor admitted to a sufficient extent the conclusions which legitimately result from them. From his views of the nature of disease we shall be obliged, indeed, very frequently and very widely to dissent; from his therapeutic directions less often. Upon the latter it is evident that the doctrines of physiological medicine have had a much more decided and beneficial influence than upon the former.

The author disavows any attempt at a formal classification of his subjects, but states his intention, should another edition be called for, to adopt, in that, an arrangement founded on the particular structure implicated in each disease. He conceives, however, that the order in which the different subjects now succeed each other, to be probably as natural as that pursued in similar works. Even admitting this to be true, the arrangement is extremely defective: by widely separating diseased conditions of the same organs, closely related to each other, and bringing into connexion others which have but little affinity, it cannot fail to confuse the reader, even if it does not lead him into error.

To fevers, with the consideration of which the first volume commences, succeed the more prominent of the phlegmasiæ, in the midst of which we have consumption. These are followed by the exanthemata, under which head is included inflammation of the skin, or erysipelas, and the volume concludes with an account of hemorrhages. The second volume com-

mences with the chronic nervous affections, at the end of which are arranged asthma, whooping cough, asphyxia and angina pectoris. The next chapter is devoted to the diseases of the heart. To these succeed the neuralgia; next follow indigestion and jaundice; then those diseases of the intestines not previously treated of, as diarrhœa, cholera, colic and worms; hæmorrhoids follow next, then diseases of the urinary organs, followed by dropsy, scrofula and scurvy. To these succeed gonorrhœa, syphilis, derangements of the menstrual flux, leucorrhœa, chlorosis and phlegmasia-dolens. Without any additional labour on the part of the author, an arrangement far more systematic and convenient than this might certainly have been effected.

Although the present treatise presents a tolerably full view of the various morbid affections of the system, yet we notice a few very important omissions. Thus it contains no account of carditis, either among the inflammations or in the chapter devoted to the diseases of the heart. Neither is inflammation of the uterus, or metritis, described, although a disease of by no means unfrequent occurrence, and often very obscure in its symptoms. Notwithstanding also the discussions to which the pathology of puerperal fever has given rise, we are presented with no formal account of this disease, nor is its identity with peritoneal inflammation distinctly stated under the latter head; indeed, no notice whatever is taken of the frequent occurrence of peritonitis soon after parturition. Among the dropsies is not included that of the ovaries, though according to our experience the most common form under which abdominal dropsy presents itself in females. Nor do we meet with any account of that peculiar affection of the mouths of children, terminating quickly in gangrene of the gums or of the cheek. This is the more to be regretted, as it is a disease of frequent occurrence, and very readily cured by an appropriate treatment, but often fatal when mismanaged or neglected. It has of late attracted the attention of several of the German writers. With the recent treatise of Richter, *Der Wasserkrebs Der Kinder*, our author is no doubt familiar.

In investigating the nature of diseases Dr Eberle professes to have followed no general doctrine or system of pathology, and this, in our opinion, constitutes the prominent defect in

the work before us. Without clear and distinct views of the principles of general pathology, it is impossible to combine together the mass of facts we possess in relation to the morbid conditions of the human system, so as to found upon them an accurate diagnosis, or a successful mode of treatment. Without a strict analysis of the phenomena of disease, and some decided opinion as to the condition of the individual organs or tissues upon which these ordinarily depend, our pathological views will be marked by the utmost uncertainty and confusion.

To attempt to borrow from the doctrines of Brown, Cullen, Darwin and Broussais, without the materials thus obtained being reduced to a harmonious system; in other words, without a *general system* of pathology is formed from them, will be very apt, in relation to different diseases, or even the different forms of the same disease, to lead to the adoption of principles of explanation in direct opposition to each other, while it cannot fail to introduce the utmost confusion into medical language. In more than one instance these results of hasty eclecticism appear in the work before us.

Thus, scarcely any thing can be more vague and unsatisfactory than the author's use of the term irritation. This denotes in one case abnormal or morbid excitement; in another the condition of the organ upon which this excitement depends, and in a third, the remote cause by which the morbid excitement is produced: again, it expresses mere functional derangement without organic disease; then a morbid state of an organ closely allied to inflammation, into which it frequently passes; in other places, it is spoken of as something distinct from inflammation, but capable of existing jointly with the latter in the same organ, while in the chapter on jaundice the author would appear to understand by it sub-acute inflammation.

The same degree of vagueness is exhibited in his use of the term fever. In some instances it is very properly restricted to the phenomena immediately dependent upon the morbidly increased action of the heart and arteries, while in others it is evidently extended to all the phenomena of disease by which those of a strictly febrile character are ordinarily accompanied. Notwithstanding, also, Dr Eberle defines fever to be "an irritated excitement of the sanguiferous system," a "general irritated vascular action," yet when he treats of the pathology

of mental derangement, he entirely overlooks this definition, and applies the term fever to the morbid condition of the brain upon which insanity depends.

"Insanity consists essentially in a *local fever of the brain*, that is, in a morbid condition of this organ, in which both its medullary and vascular structures are in a state of diseased action."

In truth, the technical language of our author is throughout more deficient in philosophical precision than we should have expected from our previous knowledge of his learning and general talents. With this exception, however, his style is correct and well adapted to a purely didactic treatise.

The work, as we have already remarked, commences with the subject of fever, to the consideration of which the first ten chapters of the first volume are devoted. The initial chapter is divided into two sections, the first of these treats "of the general *pathology* of fever," the second, "of the *etiology* of fever," and the succeeding chapter "of the *causes* of fever;" while the third and fourth chapters treat of miasmata and contagion. In this arrangement there is a degree of awkwardness and an appearance of inaccuracy which it would have been better to have avoided. If the term pathology be restricted to an investigation of the morbid condition of the organs, the term etiology should certainly include all that relates to the remote and exciting causes of disease, among which are of course to be included miasms and contagion.

"The positions which appear" to Dr Eberle, "to be susceptible of firm support, in relation to the general character and etiology (pathology?) of fever, are embraced in the following propositions:

"I. Fever consists in an irritated excitement of the sanguiferous system, and is essentially connected with a deranged state of the vital properties of this system.

"II. This irritated excitement may be the result of irritating causes acting immediately on the internal surface of the sanguiferous system, or of irritating impressions conveyed sympathetically to this system from a primary focus of irritation."

By the novel and scarcely legitimate term "irritated excitement," the author intends to express, not simply a greater degree of the natural or healthy action, but an action or ex-

citement "which is essentially morbid or distinct in quality from healthy action."

"Mere increased excitement," he observes, "is the result of stimuli acting either directly or indirectly on an organ or system whose vital properties are in a healthy or underanged (?) condition. Thus a few ounces of alcohol will cause a high degree of arterial action in an individual not accustomed to this stimulus. The same effect will be produced by any sudden and violent bodily exertions, as running or rapid walking. Here, then, there will be *increased* action of the heart and arteries, and an augmented state of the animal temperature; but fever, notwithstanding, will not be present, because the vital properties remain in a natural condition, in consequence of which the organs thus inordinately excited will return to their regular grade of healthy action as soon as the exciting cause has expended its force. As, however, all excessive action tends to weaken, and finally to derange the vital properties of the over excited part, so, when these stimuli are very protracted in their influence, they at last derange these properties, and fever is the immediate result. Fever is, therefore, essentially connected with an altered or morbid condition of the organic sensibility and irritability of the heart, arteries and capillary system; for, without such a condition, all irritants or stimuli can produce only increased, but not morbid action in the capillary and general sanguiferous system. So long as the vital properties retain their healthy condition, every excitation can only produce a greater degree of normal action—the various secretions can only be augmented, but not depraved, or morbidly diminished. So soon, however, as these properties have undergone a change from their natural state, every stimulus, whether natural or morbific, must necessarily excite a morbid action. Hence, it may be concluded, that every cause which produces fever, in whatever way its influence may be conveyed to the heart and arteries, must necessarily derange their vital properties, either directly or indirectly, before that general irritated vascular action which constitutes fever can be established."

If, in the foregoing extract, the author intends simply to prove that the general febrile symptoms, in other words those phenomena to which the term fever is strictly applicable, depend essentially upon an irritation or morbid excitement of the heart, we believe that most modern pathologists will be found to agree with him; but if we are to understand from it, that all the phenomena usually included under the appellation fever, are produced by a morbid action of the general circu-

lation, this is in direct opposition to some of the best established facts in physiology and pathology. The heart and arteries would indeed, as Dr Eberle has himself very properly observed, "appear to be the last organs which are brought into morbid action in the development of fever."

From the language employed we are inclined to believe, that by "an irritated excitement of the sanguiferous system," is meant to be expressed a diseased condition of the whole of this system, including heart, arteries, and capillaries. If this be the case, we deny the correctness of the statement. A universal irritation of the blood-vessels, throughout every organ and tissue of the body, is a condition of things which we believe never did nor never can exist; that it does not in any case of fever, must be evident upon even the slightest analysis of the symptoms.

If we understand our author correctly, the first effect which results from the application of an undue stimulus or irritating cause to any part of the system, is an increase of excitement. Subsequently, however, if the influence of the irritant be prolonged, the vital properties of the part become deranged, and an irritation is set up, which, by a continuance or augmentation of the stimulus, may pass into inflammation. This differs but little, save in terms, from our own views, and coincides very nearly with the doctrines of the physiological school. We feel persuaded that had the author studied the latter more closely, he would have been enabled to express his own sentiments with much more clearness than he has done.

In reference to the remote irritations that induce fever by their sympathetic influence upon the heart and arteries, Dr E. lays down the following propositions:

"IV. Those general causes of fever which do not act directly upon the sanguiferous system through the medium of the blood, produce fever by causing some important functional derangement or organic irritation, which successively draws other organs within the sphere of morbid irritation, until the heart and arteries are thrown into a state of irritated excitement. Inflammation is rarely the primary consequence of their influence.

"V. Although the fevers which are the result of a series of sympathetic actions do not often depend on a primary local inflammation, but rather on some important functional lesion

(the immediate result of the remote cause), yet inflammation is very apt to supervene in the structures or organs thus primarily deranged, when the general momentum of the circulation is augmented in the development of fever."

That, in fever, the primary lesion is very frequently, if not generally, confined to a state of irritation not amounting to inflammation, we very readily admit. This irritation may, in many cases, be sufficient, particularly in very excitable subjects, to affect sympathetically the stomach, brain, or heart, without giving rise to other local symptoms beyond slight functional derangement of the organ in which it is seated. This primary irritation may, subsequently, and does very generally, pass into a state of inflammation: if, however, the sympathetic irritation which it gives rise to in another organ be very intense, or amounts to acute inflammation, it may itself entirely disappear, and on examination after death, be found to have left no traces of its existence in the part at which it occurred. But the terms "functional derangement" or "functional lesion," so frequently employed by our author, and upon which he places so much emphasis as indicative of the condition of the organs primarily affected in those cases of fever not depending upon direct irritation of the heart, are altogether incorrect. We know nothing of function independent of an organ, nor can we conceive of any lesion of the functions separate from a lesion of the organs upon which the functions depend.

Dr Eberle does not hesitate to admit that fever "is always *ab initio* essentially attended with local irritation, passing sometimes into actual inflammation."

"That fever," he also remarks, "is a very common result of local inflammation, is unquestionable. So intimately are all the various parts of the animal body connected with each other by the ties of sympathy, that no structure or organ can be strongly irritated without causing a sympathetic irritation in other organs or structures. If the primary irritation involve the sanguiferous cappillaries, the irritation will be communicated by sympathy to the general vascular system, and fever will be the result; but if the local irritation be purely nervous, it is diffused, and as it were locked up in the general nervous system, and the result will be convulsions, or some other form of general nervous affection. Without doubt, too, inflammation of the mucous membrane of the alimentary canal is much

more common in febrile diseases than was formerly, and by many is still supposed. It is even probable that in many instances of fever, such inflammation exists as the *primary* and *essential* cause of the febrile phenomena. This may be especially the case in those instances of fever which result from the combined agencies of impure and indigestible diet and atmospheric vicissitudes. But although we may admit the correctness of these observations, yet to refer all fevers, remittent, intermittent, and continued to a *gastro-enteritis*, as is done by Broussais and his followers, is as remote from truth as it is detrimental in its influence on practice."

We fully agree with our author in his rejection of the proposition that every fever is a gastro-enteritis. The doctrine so much insisted upon by Broussais, that "in every case in which an organ is irritated to an extent sufficient to excite fever, the latter is invariably induced by the conjoint irritation of the heart, and the mucous membranes, especially that of the stomach*," appears to us to be contradicted by innumerable facts. It has certainly not been verified by the result of our own observations. We believe that the irritation of almost any organ, when of a sufficient grade to affect sympathetically the heart, will give rise to fever, without necessarily inducing irritation of the gastro-intestinal mucous membrane, which, in the primary stages, at least, of many fevers may remain unaffected. Nevertheless, the close sympathetic connexion which exists between the stomach and the other parts of the system;—the rapidity with which, in consequenee, irritations occurring in either of the principal organs are repeated in it, warrant our considering the stomach to a certain extent as the centre and diffuser of sympathetic impressions. Hence, few cases of fever, of any violence, can occur without the stomach being sooner or later brought into a state of irritation or of inflammation, while in the majority of cases it will be found to be the organ primarily affected. To use the words of Dr E. (page 11, vol. I.) "unquestionably intestinal irritation and inflammation perform an important part in febrile affections."

To the argument in proof of this position, to the extent contended for, drawn from the very general existence of marks of inflammation in the mucous membrane of the stomach and

* Journal Univers. des Seiences Medical. Tome VIII. p. 143.

intestines of those who die of fever, Dr E. replies, 1st, That these marks of inflammation are not so generally met with as has been maintained. 2dly, That when they do occur, they frequently supervene in the course of the disease, and are a consequence of the fever; and 3dly, That they are often produced by the disuse of purgatives by the advocates of the physiological school in the treatment of fever.

We have already admitted that fever is not necessarily connected with gastro-enteric inflammation, and that in many cases this inflammation occurs in the course of the fever; not, however, as a consequence of this latter, but rather of the primary irritation upon which the fever itself depends. It is therefore unnecessary to discuss the two first of these objections. The third objection, of which Dr E. makes great use, is thus expressed in his own words.

"The Broussain mode of treating fevers, although especially meant to obviate such inflammations, (those of the gastro-intestinal mucous membrane) appears to me, in one respect, well calculated to favour their occurrence. The almost total proscription of purgatives from the list of our remediate means for the treatment of fever, so far from lessening the tendency to gastro-enteritis, tends, I conceive, in general, to an opposite result. In a recent work by Bouillaud, there are upwards of sixty cases of fever reported, in not a single instance of which was there a purgative medicine exhibited by the mouth. In all of these cases, however, marks of inflammation, and in the majority, ulcerations were detected in some portion of the mucous membrane of the bowels. That this should have been observed, will not appear strange, when it is considered that in all these cases, most of which continued from three to four weeks, all the *acrid* and vitiated contents of the intestines were suffered to remain undisturbed, to act on their delicate lining membrane."

If it were true, that indications of pre-existing inflammation are to be met with only in the bodies of those who die of fevers that have been treated without purging, the foregoing remarks would then have some weight. But the fact is not so. Redness, thickening and softening or ulceration of this membrane occur in the majority of those who fall victims to fever;—certainly as often in cases in which purgatives have, as in those in which they have not been employed. These very appearances are described by Roederer and Wagler, by Hildenbrand and

others by whom purgatives were certainly not banished from the list of remedial agents in fever. To say nothing of the other indications of fever, ulcerations were discovered in ninety-two of the cases related by Andral*, by whom purgatives were employed, and they are noted as having been very commonly observed in the cases referred to by Dr Tweedie in his clinical illustrations†; notwithstanding the latter gentleman, as he assures us, was very careful to keep up a *gentle* action of the bowels by purgatives throughout the disease. But Dr Eberle informs us that intestinal irritation and inflammation may, no doubt, frequently be produced "in consequence of harsh and repeated purgation, and the use of other irritating remediate agents." The line which separates the extent of purging necessary to prevent the occurrence of gastro-enteritis in fever, from that which gives rise to it, ought certainly to be strongly marked and well guarded; a slight transgression on either side, if the author's opinions are correct, must be productive of serious consequences.

"In all febrile affections, the secretions, which are poured into the intestinal tube, are" it is said, "unnatural and vitiated." That in a certain sense they do invariably become vitiated in the course of the fever, is certainly true. We suspect, however, the author goes too far, when, from the fact of their vitiation, he infers that they are invariably acrimonious. But be this as it may—what, we ask, has caused their vitiation? Let the author himself reply. "I think" he observes, (vol. 2. page 266) "it may be assumed as a pathological axiom, that the function of secretion can never be deranged, (and in no other way can the fluids of secretion be vitiated,) without the existence of *irritation* in the secreting organ." Now the greater amount of the secretions poured into the intestines is furnished by the capillaries of the mucous membrane; hence, from the author's own showing, the intestinal mucous membrane in all febrile affections is in a state of irritation, and when such irritation exists, Dr E. admits (vol. 1, page 11) that "the soothing treatment recommended by Broussais, would, no doubt, be much more salutary than the vigorous purgative plan, so commonly pursued in this country and in

* Clinique Medicale. † For a review of this work see our 19th No.

England," with the view of ridding the intestines from their vitiated secretions.

On the subject of purging in fever, with the view of ridding the intestines from their vitiated secretions, a sentence is made use of by the author, in his first volume, page 94, which so fully expresses our own sentiments and experience, and from which a practical lesson of so much importance may be drawn, that, notwithstanding its length, we cannot refrain from extracting it. Extending, however, what the writer applies to bilious remittent fever, to fevers in general.

"There is one fault which a physician sometimes commits in the treatment of fevers, and that, too, for the most part, when he thinks he is doing right:—I allude to the long continuance of purgative medicines. He is apt to think that the impurities have been long fixed in the bowels, and in order to cleanse his patient thoroughly, and to leave nothing noxious behind, he persists in the use of purgatives. What is worse, every appearance of these cases would seem to justify his suspicion of the existence of fixed impurities of long standing in the bowels, and confirm him in his design of at once and for all making a clean house. The *longer he continues to give his purgatives, the fouler does the tongue become, and the more distressed the stomach; the symptoms, in short, of intestinal impurities become more and more conspicuous, whilst he continues to dilute and to evacuate, without reflecting or knowing that he is himself the cause of all the noxious matter in the intestines, by constantly irritating them with his purgatives, and keeping up an afflux of fluids to the internal or villous coat.* The most healthy individual will get a foul tongue and lose his appetite if he take neutral purgative salts for several days in succession."

As a further offset to the evidence adduced from post-mortem examinations, in proof of the gastro-enteric doctrine of fever, it must be observed, says Dr Eberle, that

"So far as the mere redness or injected state of the mucous membrane is concerned, we can draw no certain inference as to the previous existence of inflammation in this structure. That these phenomena are frequently the result of changes effected in *articulo-mortis*, or *post mortem*, is fully demonstrated by the observations of Mr Yellowly and of Mr Seeds."

It is to be recollected, however, that "mere" redness, or mere injection of the vessels of the mucous membrane is not supposed by the advocates of the physiological school to afford unequivocal evidence of preceding inflammation. They have, on the contrary, attempted to point out the mode

in which the appearances actually produced by inflammation in the mucous membrane may be distinguished from those which have a different origin; and if any dependence is to be placed upon the observations of Billard and others, and the experiments of Dr Horner, and of Cassimir Broussais, the distinctive characteristics of the former are so well marked, that he must be considered a very careless observer by whom, on this point, any important mistake is committed. Dr Eberle does not, himself, appear to think the mistake can frequently occur, when he remarks,

"It cannot, indeed, be presumed, that the injected state of the mucous membrane of the intestinal tube, so often discovered in those who die from fevers, is always, or even generally, to be ascribed to a mere post mortem change; but that such changes do sometimes, nay often, occur, and that they have been assumed as evidences of previous inflammation, there can exist but little doubt."

The course and phenomena of intermittent fevers present us, according to our author, with insurmountable objections to the physiological doctrine. We do not think, however, that he has succeeded in establishing the position here assumed. "Inflammation" he remarks, borrowing the language of Armstrong, "cannot exist in the cold stage of fevers, all the phenomena of which are opposed to inflammation." But we are to recollect that all the phenomena of the cold stage, "the weak contracted pulse, the general languor and lassitude, the diminished temperature, and the sense of chilliness," usher in almost every fever, and yet, according to Dr E. "fever is a very common result of local inflammation." The most decided inflammations, those of the lungs, stomach, kidneys, peritoneum, &c. often commence with a chill equal in intensity to that which ordinarily occurs in intermittent fever. In peritonitis, especially, the cold stage is seldom absent, and, as remarked by A. C. Baudelocque, extends in some cases to every part of the body, and is attended with violent and long continued rigours*. We perceive, therefore, that the mere existence of the cold stage forms no argument whatever in proof of the non-dependence of intermittent fever upon a local irritation, or even actual inflammation.

* Traitè de la Pèritonite Puerpèrale; reviewed in the 20th number of this Journal.

But the principal objection to the doctrine which refers intermittent fevers to gastro-enteric irritation, Dr E. conceives to be their periodicity, according to his views:—

"An inflammation which observes a perfect periodicity in its attacks, must be *sui generis*. If intermitting fever depend on inflammation of the mucous membrane of the alimentary canal, then must this inflammation be periodical, and, therefore, essentially distinct from the inflammation which produces *remitting* fever; for in this malady it must be continuous. These two forms of fever are, however, produced by the same remote cause; and we are therefore forced to admit, by the assumption of this doctrine, that the same remote cause is capable of producing two kinds of inflammation, essentially distinct from each other."

The author admits that some affections "of an inflammatory character, have been known to recur in a strictly periodical manner," but declares, that "such cases must be viewed as anomalies, and altogether contrary to the almost universal course and character of phlegmasial diseases." But, we ask, is this really the case? Are intermittent-phlegmasiæ of such rare occurrence? We believe, on the contrary, we are borne out by facts, in the assertion that inflammations marked by perfect intermissions of a shorter or longer duration, are very frequently met with. In the books, it is true, they have very generally been described as masked intermittents—intermittents confined to a single organ. Tommasini is almost the only modern pathologist who has denied the existence of these inflammations; considering them invariably as forms of intermittent fever.

But we are not contending for the existence of acute gastritis as the cause of intermittents. We believe them very generally to depend upon a simple intermittent irritation, either of the stomach or of some one of the other organs. We have known all the phenomena which constitute these fevers to be produced by the irritation of worms, or of indigestible substances in the stomach, and to cease almost immediately upon their expulsion. Dr E. has seen one case, where, in a delicate child, "a distinctly formed ague was manifestly produced by intestinal irritation, from too free an indulgence in irritating articles of food." In these and similar cases, the primary irritation would appear to be permanent, the periodi-

city being confined to the sympathetic irritation of the heart. Chronic peritonitis is often attended with a distinctly marked intermittent fever; the phenomena of the latter may also result from the chronic effects of arsenic introduced into the stomach.

Dr Eberle declares that inflammation of an intermittent type must be *sui generis*,—essentially distinct from that which is continued, and incapable of being produced by the same remote causes. This, however, we deny. We can see no reason whatever, from the mere circumstance of an inflammation being intermittent or continued, to infer any essential difference in its nature. But if the opinion of Dr Eberle be correct, and the fact of their continuance or intermission is sufficient to constitute an essential difference between inflammations, must not the same be true also of irritations? Now Dr E. contends, that all fevers consist in an irritation of the sanguiferous system; is then the irritation which gives rise to intermittents *sui generis*, differing essentially from that which produces remittent or continued fever? If the reply be in the affirmative, the opinions of our author in regard to fever are liable to the same objection he adduces against those of Broussais; for he ascribes to the one remote cause, marsh miasmata, both intermittents and remittents. But not only does Dr E. refer the irritation of the sanguiferous system, which occurs in intermittents and remittents, to miasmata; but to the same cause he refers also the acute continued inflammation of the intestines, upon which dysentery depends.

"Of a number of individuals exposed for a certain time to the same *miasm*, some may become affected with intermitting fever, others with mild remittent fever, some with malignant bilious fever, some with bilious colic, some with dysentery, &c."

The fact is, too much importance has been ascribed in investigating the pathology of fever to the mere circumstance of their symptoms being continued or periodic. In this respect we may say with Rubini, "La considerazione del tipo, e della periodicita non presenterebbe che oscurissime discussioni ed inutili*."

* For further observations on the subject the reader is referred to our review of the work of Mongellaz, Vol. I. page 323; and of Dr Dewees, Vol. X. page 85.

An objection is adduced by our author to the supposition of intermittent fever being dependent upon local inflammation, especially of the stomach and intestines, from the character of the remedies most effectual in its cure.

"Who can believe," he asks, "that quinine, arsenic, black pepper, and other remedies of a similar character are peculiarly calculated to cure inflammation of the mucous membrane of the alimentary canal"—"and yet all experience goes to prove that they are decidedly the most prompt and valuable means for the cure of intermitting fever."

All reasoning as to the seat and character of a disease drawn from the nature of the remedies employed in its cure, must be received with a good deal of caution. We know little of the manner in which many of our remedial agents act upon the system, while not unfrequently we are led into error from the fact that certain morbid phenomena will disappear under a particular course of treatment, not, however, in consequence of the latter having restored the diseased organs to a state of health, but merely from its having changed their pathological condition.

But admitting that "quinine, arsenic and black pepper," are the remedies best adapted to "the *cure*" of intermitting fever;—we cannot perceive how this disproves its connexion with a local intermittent irritation, or inflammation, of the stomach. At what period of the disease does their administration most certainly effect a cure? Is it not during the intervals, or in other words, in the absence of the fever? And do they not always act with the greatest certainty, according as the intermissions have been rendered the most complete, previously to their being resorted to? The experience of Dr Eberle, in common with that of every other observing physician, proves the affirmative. It is not, therefore, to cure the local irritation, or inflammation, upon which intermitting fever depends, that we resort to what are generally termed tonics; but in the intervals of this irritation to produce an impression upon the organ in which the irritation is seated, calculated to prevent its return. During the existence of the irritation these remedies are calculated rather to do harm than good; and we assert, confidently, that in the hands of the practitioner, who by the judicious use of bleeding, leeches or cups, ensures a complete solution of the local irritation, be-

fore resorting in intermittent fever, to the bark or quinia, these will be found very generally and promptly to effect a permanent cure. He will, it is very certain, meet with few of those speedy relapses or complete failures so much complained of, under the ordinary routine practice pursued in this disease.

Our space will permit us only to glance at the opinions advanced by Dr E. in relation to the remote causes of fever and their mode of operation. The former he arranges under the following heads.

"I. Recrementitious substances, which in health are separated and thrown out of the system, but being retained in the circulation, or reabsorbed, become a source of irritation to the sanguiferous system, and, therefore, of irritative fever. These morbific causes are always *secondary*, being themselves the consequences of an anterior injurious cause or impression. Thus, the retention of perspirable matter can occur only in consequence of the influence of some previous cause, adequate to disturb or arrest the action of the cutaneous exhalents. The recrementitious fluids which appear to be most injurious to the animal economy when retained in the circulation, even in their elementary forms, are the perspirable matter, the bile, and the urine; and of these, the first is perhaps the most frequently concerned in the production of fever. The influence of causes of this kind in the development of fever, is probably much more extensive than is generally admitted in etiological inquiries. In all that extensive class of febrile affections which arise from the influence of cold, retained perspirable matter performs, probably, a principal part in their development.

"II. Irritating substances generated within the body, but wholly independent of any organic actions. These causes of disease are usually generated in the primæ viæ, and consist of worms, acids, mucous, and various other irritating substances, resulting from the fermentative or putrefactive processes.

"III. Morbific agents, generated out of the animal body, consisting either of deleterious substances floating in the air, or of the sensible properties of the atmosphere, or, finally, mechanical causes—namely, miasmata, noxious gases, heat, cold, electricity, humidity, and mechanical injuries.

"IV. The fourth and last class of morbific agents comprehends those causes which are generated by a morbid organic action of the living system, constituting the various contagions."

Of these causes some are presumed to act in the production of fever, by a primary morbid impression on the nerves of the stomach, skin, or some other part of the body, while others are taken into the circulation by absorption, and act immediately upon the internal surface of the heart or blood-vessels.

The primary impression of the first set of causes being conveyed to the sensorium commune, is thence reflected throughout the whole nervous system.

"As the different organs of the body are, however," remarks Dr E. "endowed each with its own or peculiar modification of sensibility, there must be some that are insusceptible, whilst others are peculiarly susceptible of receiving and responding to the reflected morbific impression; and these latter, it is reasonable to presume, will be irritated and functionally deranged. From the organs or organ thus primarily irritated, the morbid excitement passes from organ to organ, or tissue to tissue, according to their various degrees of sympathy with the part primarily affected and with each other, until the whole system is involved in morbid excitement."

Foreign substances may undoubtedly enter the blood through the medium of the absorbents, and in this manner may act immediately upon the heart; or, as more commonly happens, their effects may be directed to some one of the other organs. Upon the truth of this depends the whole system of endermic medication*. But that fever is very commonly produced by morbific causes thus introduced into the system, is a proposition by no means so well established. Especially must we

* In attempting to prove the action upon particular organs of foreign substances introduced into the blood, from the fact that certain articles of the materia medica applied upon the skin, or introduced into the veins, will produce their specific effects, Dr Eberle remarks, "Thus, if tartar emetic be kept in contact with the external region of the stomach, the impression which it causes will be conveyed to the brain, which in its turn will reflect the impression throughout the whole nervous system; but as the stomach alone is endowed with a mode of feeling capable of receiving this peculiar impression, it will be in this organ that its effects will be conspicuous." If it be meant that tartar emetic applied as here described will produce nausea or emesis, the author has been led into a mistake; neither tartar emetic nor other articles, generally speaking, which, like it, produce a violent irritation of the skin, will, when applied to the latter, exhibit those effects which result from their introduction into the stomach. We admit, however, the general proposition that morbid impressions made upon the skin will be reflected upon internal organs.

dissent from the author's opinion that cold acts in the production of fever by suppressing the function of the skin, and thus causing the matter of perspiration to be retained in the blood, and become a source of irritation to the heart and arteries. The morbid effects which usually result from the application of cold are inconsistent with this supposition:—these are usually local inflammations in the immediate vicinity of the part which has experienced the influence of the cold, or of some organ which closely sympathises with it. Fever, in place of being the primary disease, often does not occur at all, or only in a very slight degree. Even when it does occur, it is frequently not until after the local inflammation has attained to some height, and evidently as an effect of the latter.

But in whatever manner we may presume the first impression of the remote causes of fever to be made, whether upon the surface of the body or upon the mucous membrane of the stomach, the intestines, or the respiratory organs, or by their being received into the circulation, and acting directly upon the heart or blood-vessels, it is confessed that their first effect is the production invariably of a local irritation.

"Fever," says Dr E. "perhaps always commences by a local irritation. Even when it is the result of causes which act immediately on the internal surface of the vascular system, the irritation is probably at first confined to a comparatively small portion of this system—namely, the heart, or the capillaries of some particular organ or structure, according to the nature of the remote cause."

Those cases of fever in which the heart receives the primary irritation will be found, we suspect, to be extremely rare. J. P. Frank reports, that in the bodies of patients who had died of inflammatory fever, he has met with an inflammation of the lining membrane of the arteries: we cannot, therefore, deny that an irritation or inflammation of the inner surface of the heart or of the large blood-vessels may be occasionally the local disease upon which fever depends; but upon a careful analysis of the phenomena presented in the majority of the cases of fever, we are persuaded that the symptoms of an irritation of the stomach, the brain, or of some of the more remote organs, will be found to exist previously to the occurrence of symptoms strictly febrile, and to be rendered more evident as the fever developes itself, by very

generally passing into a state of inflammation more or less acute.

The chapters devoted to the consideration of miasmata and contagion present a very excellent condensed view of the doctrines ordinarily entertained upon these subjects, especially by the European writers. The correctness of many of these is, however, in our opinion, extremely doubtful; we regret that space is not allowed us to enter upon their examination.

Dr E., while he admits the origination of typhus fever from idio-miasmata, refers, in common with many other highly respectable writers, its propagation, in some instances at least, to contagion. We must confess, however, that none of the arguments which he has advanced appear to us to establish this opinion, while it is in direct opposition with the definition as well as with the laws of contagion which he has himself laid down. Contagion he defines to be—

"A deleterious agent secreted by the animal body in a state of disease, which, when brought to act upon a healthy individual, will produce a disease *specifically similar* to the one from which it derives its origin." Again, "the power which the acute contagious diseases have of *destroying the susceptibility of the human constitution to the subsequent influence of their specific causes*, constitutes one of the most remarkable and mysterious characteristics of this class of maladies." "In consequence of this law of *acute* contagious diseases, no malady of this kind can ever relapse during the period of convalescence."

Now not one of these circumstances is true, of the fevers usually classed under the head of typhus. The author, it is true, has attempted to prove that typhus fever is a specific disease; in this, however, he has certainly entirely failed.

"How far" remarks Dr E. "a mixture, or the combined agency of *koino* and *idio-miasmata*, may operate in producing novel or anomalous varieties of fever, it is impossible to say; but that such a combination does sometimes occur, and give rise to fevers of a peculiar or mixed character, will scarcely be doubted by any one who has given due attention to this interesting subject."

What is exactly to be understood by fevers of a *peculiar* or *mixed* character is somewhat difficult to determine. If by this expression nothing more is meant than the combination, in the same case, of the symptoms of typhus, for instance,

and bilious fever, or in other words, the co-existence of phenomena dependent upon disease of the brain and of the stomach and biliary organs, this, we readily grant, may occur from the joint agency of a variety of causes. In this sense every fever, excepting perhaps simple ephemeral fever, must be considered as of a mixed character—very few cases indeed occurring in which the irritation of the heart is not accompanied with disease of other organs. Dr E. adduces, as an example of mixed fever, "the peculiar fever which prevailed among the blacks in this city a few years ago." If the epidemic that occurred in 1821, principally among the lowest class of blacks, is here referred to, the author is perfectly correct in denominating it a mixed disease, and in referring its origin to the combined agency of koino and idio-miasmata. We cannot, however, admit that this fever presented any thing peculiar. Its symptoms and progress, as well as the appearances discovered upon dissection, and we speak from numerous personal observations, evinced clearly its dependence upon gastro-encephalic inflammation. In the majority of instances, the affection of the stomach and brain occurred simultaneously; in others, the encephalic inflammation was secondary; in many cases inflammation of the lungs was also present. Fevers simply considered—that is to say, the phenomena dependent upon irritation of the heart, can differ only in their degree of violence; all the other modifications which febrile disorders prevent, are invariably to be traced to the nature and extent of the organic lesions, which occur as the cause of, or in connexion with the irritation of the heart.

The author's division of fevers is into intermittent, remittent, yellow and continued, the latter being subdivided into synocha, synochus and typhus. We cannot stop to enumerate the numerous objections to which this division is liable. The trifling claim it has to the title of scientific, must be evident from a moment's consideration of the principles upon which it is founded, while the little aid it affords in facilitating the study of either the pathology or the treatment of this class of diseases, can scarcely recommend its adoption on the plea of utility.

In the production of intermittent fever, the author appears to us to ascribe too much to the agency of koino-miasmata.

That this is a very frequent source of this form of disease, there can be no doubt, but that it may, and does frequently arise from nearly all the ordinary causes of fever, we have the most abundant evidence. The fact is even admitted in the work before us, as will be perceived by the following sentence, which certainly contains either a mistake or a direct contradiction in language.

"Although koino-miasmata may be regarded as the universal cause of intermitting fever, yet various other causes may, under favourable circumstances, give rise to this form of fever."

Speaking of the period which sometimes elapses between the reception or impression of the miasm and the occurrence of the fever, Dr Eberle observes, that hence, in order to guard against an attack of the latter,

"Persons who have been exposed to miasmata, ought to be careful to avoid every thing capable of debilitating the system, and particularly the digestive organs, for at least two weeks after."

But this direction is diametrically opposed to a sentiment advanced by him when treating of the predisposing causes of fever, and in the truth of which we concur; viz. that neither debility of the system generally, nor of any particular organ, predisposes it to the influence of the morbific agents concerned in the production of these diseases.

"It is well known," he observes, "that the most robust and healthy individuals are generally the first and most certain victims of febrile epidemics. The vigorous and the healthy are often prostrated under the devastating dominion of pestilence, and even under the less ruthless sway of the milder paludal fevers, whilst the feeble and the valetudinarian pass along untouched. It may, moreover, be observed, that in the feebleness of convalescence from bilious, typhus, and other forms of fever, fresh attacks, or relapses, are by no means so common as one would expect, if mere debility constituted febrile predisposition. When, also, we wish to obviate fever after a surgical operation, we reduce the system by low diet, purgation, and perhaps blood-letting."

While, however, we deny to a state of more debility the power of inviting an attack of disease, it must be observed, that whatever is capable of producing an irritation in either of the principal organs, will have this effect. Hence, as the author has well observed—

"Of all the precautions which those who visit insalubrious climates may be required to adopt, the avoidance of every thing which is calculated to derange the digestive functions, is perhaps the most important."

Upon the author's therapeutic directions for the management of intermittent fever we have little to remark. In the use of the lancet he is, perhaps, rather more reserved than we should be: while in those cases in which the symptoms of gastric irritation are particularly prominent, we should undoubtedly insist upon the propriety of combatting it by leeches or cups to the epigastrium previously to the administration of the bark or quinia, in preference to either "mild mercurial purgatives" frequently repeated, or emetics, as he directs. With these exceptions the general rules of treatment he has laid down are unquestionably highly judicious.

In the only instance in which Dr E. has resorted to bleeding during the cold stage, as recommended and practised by Mackintosh, he found it to moderate the violence of the chills, and to curtail in a manifest degree their duration.

In treating of the period best adapted to the administration of the bark or its preparations, he informs us, that he has reason to apprehend "that a large dose of quinine given during the chills, is calculated to produce some very disagreeable effects."

"In two instances, one a delicate married lady, and the other a lad about twelve years old, a most singular and raving species of maniacal affection ensued, apparently from taking large doses of this medicine after the chills had commenced. In both instances this alarming mental disturbance continued for several hours. "I may" he adds, "be wrong in ascribing it to the cause here assigned, but the circumstances strongly favoured the suspicion."

Dr E. states that, "for five or six years past, whenever I have met with a case of ague which, though arrested by bark, always relapsed again, which generally occurs about the seventh or fourteenth day, I have suffered the disease to run on for at least five paroxysms, and in a few instances over the seventh, before any attempt was made to check it; and I have invariably found this plan permanently successful."

This practice is the one recently advocated by Recamier as the most effectual and the safest for the future health of the patient.

We should doubt the propriety, however, of its general adoption.

Between the simple autumnal *remittent* and intermittent fevers there exists, according to our author, no essential or radical difference. They are produced by the same cause, and differ from each other only in the grade of violence and duration of the paroxysms.

"If we take a general view," he remarks, "of the phenomena of remitting fevers, we may readily perceive that they point to the particular derangement of two important organs—the liver and the alimentary canal. We may perceive, moreover, that there are some cases of this disease in which the phenomena of gastro-enteric derangement predominate, whilst there are others in which hepatic disorder impresses its peculiar stamp or character on the disease. To the former we may apply the term *gastric*, and to the latter *hepatic*."

That the phenomena of bilious or remitting fever are to be referred to an irritation, more or less intense, of the stomach and upper portion of the intestinal canal, extending to the biliary organs, and in many cases affecting sympathetically the brain also, there can be little doubt. To the division, however, of the disease into gastric and hepatic, as proposed above, we object, it being altogether useless in a practical point of view, whilst it is very apt to mislead. The appearance or non-appearance of the bile in the discharges from the stomach, of which this division is mainly predicated, is to be attributed merely to the greater or less degree of irritation experienced by the liver.

What Dr E. means by derangement of the stomach and liver, will be better understood from the following sentence.

"In the treatment of this disease there are three primary pathological conditions, according to which the general indications of remediate management must be directed, viz. 1. Functional derangement of the liver and alimentary canal. 2. Redundancy of morbid or vitiated secretions; and 3. An irritated increased action of the heart and arteries."

Now, "functional derangement" of an organ is, according to our author, synonymous with irritation; the second proposition is therefore involved in the first, for we have already shown that he believes vitiation of the secretions to be in every instance the result of irritation. Hence, also, though vitiated

secretions may increase, it is incorrect to say they produce the irritation upon which they themselves depend.

The same want of pathological precision is evidenced in the author's statement of the indications of cure. These are,

"1. To moderate the febrile reaction of the arterial system; 2. To remove out of the alimentary canal the vitiated and irritating secretions which may be lodged in it; 3. To restore the healthy functions of the liver and alimentary canal; and 4. To obviate gastro-intestinal irritation."

All of which are, in fact, comprised in the last. To obviate gastro-intestinal irritation, is the most effectual means of restoring to the stomach, intestines and liver, their healthy functions, and of moderating the morbid sympathetic action of the heart and arteries, while it includes the removal of every thing, in or out, of the intestines, calculated to keep up or augment irritation.

The remedial measures proposed by Dr E. for fulfilling the above indications would have met with our entire approbation, had he insisted upon a more general resort to leeches or cups applied to the epigastrium, with the view of relieving the gastro-intestinal irritation, and preventing its extension, or the possibility of its passage into inflammation.

On the subject of bleeding Dr E. remarks, "there can be no doubt that, in particular localities, and under peculiar circumstances of atmospheric constitutions and vicissitudes, remitting fevers may sometimes assume a character which demands the free use of the lancet." We believe that there are few cases of the disease in which some degree of direct depletion, especially by leeches or cups, is not demanded.

"In all maladies," says the author, "the state of the pulse must be our guide, as to the propriety of bleeding, and wherever it is found either *hard* or *tense*, whether it be full or contracted, blood may be safely, advantageously drawn, whatever may be the name or the general character of the disease."

This may be true so far is it regards general bleeding, but we apprehend that many cases do occur in which, though the state of the pulse does not indicate the use of the lancet, advantage will result from the employment of topical bleeding. Here the degree of irritation existing in the organs principally affected must be our guide.

With respect to emetics, the author is inclined to think that

"they may be generally well dispensed with, without losing any peculiar remediate advantages." Though the operation of an emetic may procure a degree of temporary benefit, "yet some risk will be incurred of its exciting a degree of permanent irritation, which will subsequently exercise a most pernicious influence upon the phenomena and progress of the disease." This entirely corresponds with our own experience. Even to nauseating doses of tartarised antimony, or as it is administered in the nitrous powders, the author very properly objects, they having a tendency "to irritate the bowels, and to cause frequent and griping watery stools, which rarely fail to aggravate the violence" of the fever: he accordingly recommends ipecacuanha to be substituted in the nitrous powders for the emetic tartar. From small doses of ipecacuanha and calomel we have certainly seen very considerable advantage result in remittent fever, but our experience is rather adverse to the addition of the nitrate of potass to this prescription.

Although Dr E. believes there is no class of remedies more indispensable in the treatment of remittent fever than laxatives, yet he observes very correctly that—

"There are no medicinal agents which are so frequently abused, or improperly employed in this disease, as this very class of evacuants. Violent and irritating cathartics, when repeatedly administered in this form of fever, seldom fail to induce a state of irritation in the mucous membrane of the bowels, from which a train of distressing and dangerous consequences arise in the advanced stages of the malady, which are often of more serious import than the original disease itself."

In cases of remittent fever attended with "great irritation, or subacute inflammation of the bowels," Dr E. has so often seen the most decided benefit from an emulsion of balsam copaiva, that he conceives he should be neglecting an important curative means, were he to omit its use under these circumstances. His prescription is as follows:

"℞ Bals. Copaiv. ʒss. Sacch. Albi. ʒss. Pulv. Gum. Arab. ʒij. misce dien adde aq. fontanæ, ʒij. M ft. Take a spoonful every two hours."

When this fever is attended with excessive gastric irritability, Dr E. very judiciously ranks blood-letting among the means best calculated to allay this very disagreeable and even alarming symptom.

"To be beneficial in this respect, however, it must be early and copious. I have known excessive irritability of the stomach and retching promptly checked, in the onset of the disease, by one efficient bleeding."

But our limits will not permit us to enter into even a general consideration of the treatment proposed by our author in this form of fever; suffice it to say, that in its general outlines it corresponds with that pursued by our most successful practitioners.

Passing by the very excellent chapter on yellow fever, as well as those on synocha and synochus, two forms of fever, the diagnosis of which being founded almost exclusively on the different degrees of activity in the action of the heart and arteries, do not deserve any particular attention, we arrive at the chapter devoted to *typhus*.

Typhus fever, the author considers, as we have already remarked, to be a disease *sui generis*—"a *peculiar* form of fever, capable of propagating itself by contagion;"—"a form of fever radically diverse from every other form and variety of febrile disease." Strange, however, as it may appear, he has entered into no argument, nor has he adduced a single fact to establish the truth of these opinions.

Upon an investigation of the nature and causes of typhus fever, our limits will not permit us to enter. We do think, however, that any one who will take the pains to analyse strictly the symptoms which the author has laid down as those characteristic of this form of fever, must be convinced that they all point out, most conclusively, the dependence of the disease upon lesions seated in the alimentary canal and the brain; the latter giving rise to nearly all of those peculiarities which distinguish the phenomena of typhus from ordinary fevers. This statement is fully borne out by the appearances very generally met with after death. Upon the pathology of a large class of those diseases usually arranged under the head of typhus and putrid fevers, we conceive that the publications of Bretonneau and of Gendrin, in reference to the disease denominated by the former *dothinentery*, throw much light.

As to the question of contagion in typhus fever, we can only say, that we have examined it for ourselves, and after weighing duly the facts urged on either side, feel ourselves prepared to deny the production of the disease in any case from other

causes than idio-miasmata, or the ordinary causes of fever, acting upon systems placed under particular circumstances of predisposition.

"It is indeed not to be denied," Dr E. remarks, "that when marsh miasmata, or, perhaps, any of the usual causes of fever, act on a system which has been depressed and debilitated by the enervating influence of cold, want of nourishment, mental distress, &c. a low or *typhoid* state of fever will be developed; but the course and characteristic phenomena of such fevers do not accord with those which mark genuine contagious typhus."

In what, however, the discrepancy between these *typhoid* forms of fever and *genuine typhus* is evinced, the author has neglected to inform us.

Dr Armstrong asserts, and we believe with perfect truth, that remittents often assume the appearance and character of typhus; and that these two forms of fever resemble each other in many of their most striking symptoms. "Remitting fever," he observes, "is always attended with a simultaneous affection of the brain, the mucous membrane of the respiratory passages, the mucous membrane of the alimentary canal and of the liver—a combination of symptoms always present in typhus." But according to Dr E. "the characteristics of typhus do not consist in any of these circumstances."

"With respect," he remarks, "to the alleged conversion of remittents into typhus, it may be observed that the former do, indeed, in some instances, assume a *low* or *typhoid* character; but this may be predicated of nearly every other variety of febrile disease, and cannot be justly urged as an argument in favour of the common origin of the two diseases. I have myself known ten cases of ordinary bilious remittents, brought together in an illy ventilated and narrow apartment, degenerate into low and putrid fevers of a highly fatal character."

But was it not incumbent on the author to point out in what consisted the difference between these low or typhoid cases and the ordinary cases of typhus? Whenever in any fever the brain becomes involved in disease, the change which the symptoms undergo render the case then, in our opinion, as essentially one of typhus as though it had assumed this character from the first.

To the plan proposed by Dr E. for the treatment of typhus fever, we have nothing of moment to object. He is, and we think with great propriety, extremely cautious and reserved in the recommendation of stimulants. He remarks, how-

ever, that "when we consider that ammonia has a tendency to counteract the inebriating effects of alcoholic liquors, we have reason to suppose that the union of these two articles is peculiarly appropriate as a stimulant in this disease." So far as our own experience goes, and a public situation has given us an opportunity of seeing not a little of the disease, we have never found a case, when properly treated in its early stages, to require the administration of alcoholic stimulants, and very seldom one in which even the use of vinous stimulants was called for.

Dr Eberle's chapter "on inflammation in general," contains a very excellent view of the leading facts in relation to this subject. It presents, however, one or two hypotheses, the correctness of which, had we room, we should be inclined to contest. One in particular strikes us as being altogether untenable. It is that which maintains that inflammation of the capillaries of the part affected ought to be regarded as being in a state of "irritated excitement, connected in some cases with an increased, in others with a decreased power of action; and hence, that there is "a typhus and a synochal state of local inflammation," the first requiring stimulants, the second sedative agents for its cure. For our own part, we must candidly say, that we have never seen a case of inflammation in which sedatives appeared to be counter-indicated, or one which was not aggravated by the use of stimulants, properly so called.

One of the modes in which, according to our author, inflammation may be produced, is by *metastasis.*

"Thus," he remarks, "erysipelas will sometimes pass in and fix itself upon an internal organ; and gout will pass from the feet to the stomach, brain, and to various other parts."

Now he certainly does not mean to assert what is here implied—that the same inflammation which is seated in the skin, in the one instance, and in the feet in the other, really passes into the internal organs. This we believe was at one period actually maintained; but a more correct knowledge of the morbid states of the system has long since repudiated this absurd notion, and it is time that the modes of expression to which it gave birth should be rejected also.

The present chapter closes with the following important concession:—

"Pure idiopathic or general fevers, without the accessary

irritation of local inflammation, can never continue very long. Mere morbid excitement from general causes or movable irritants, is generally soon overcome by the organic, or what has been called the sanative actions of the animal economy."

Hence, as we contend, the physician will seldom be called upon to treat a case of fever which is not dependent upon more or less inflammation of some one of the internal organs. As this proposition has a very important bearing in a practical point of view, we are gratified to find its truth thus clearly admitted by our author.

The more prominent phlegmasiæ of the brain and its membranes are treated of with great ability; the same may also be said of the inflammations, acute and chronic, of the alimentary canal. We see no good reason, however, for separating indigestion from chronic gastritis, and placing it, as the author has done, after the nervous affections; more especially, as he recognizes unequivocally the identity of the two diseases. It is true, that in concluding his account of indigestion, he observes:—

"Let it be constantly borne in mind, that functional derangement of the stomach may be the consequence of mere debility and relaxation—or of high irritation and morbid sensibility—or finally, of a chronically inflamed condition of the mucous membrane of the digestive organs."

The term debility, when applied to an organ, conveys to us no definite idea; and until we clearly understand what is the actual pathological condition that is intended to be expressed by it, it is in vain, we are told, that it is to be overcome by means calculated "to increase the tone and activity" of the diseased organ.

Dr Eberle treats of *acute peritoneal enteritis* in chapter xiii.; and in chapter xvi. of *acute peritonitis*. But why these two varieties of peritonitis are thus considered separately, does not appear. We do not believe that the diagnosis between inflammation of the peritoneum lining the abdominal parietes, and that covering the intestines, as laid down by Abercrombie, will hold good at the bed-side; or, provided it were, that it would afford us any advantage in a practical point of view.

Dysentery is ranked as an ucute inflammation of the mucous membrane of the alimentary canal, particularly of the colon and rectum. With the etiology of the disease, as given by

our author, we perfectly accord; we must differ from him, however, as to the propriety of at least one of his therapeutical directions. Thus, he remarks, "purgatives, under judicious management, are among our most valuable curative means in this affection." A similar opinion, we are fully aware, is very generally advocated by medical writers, and in the commencement of our practice, we ourselves acted upon it, but were soon convinced that purgatives, so far from proving serviceable in dysentery, very generally tended only to augment the tormina and tenesmus; accordingly, for several years, instead of resorting to them, we have endeavoured to put a stop to the abnormal action of the bowels by the administration of opium in combination with ipecacuanha and acetate of lead. By this means, in conjunction with bleeding, either general or topical, as circumstances may indicate, fomentation to the abdomen, or blisters, the disease has almost always very promptly yielded—more readily, we think, than under the ordinary purging plan, and certainly with a great deal less of suffering to the patient.

Speaking of rheumatism, Dr Eberle observes, that—

"Whatever ideas may be entertained in relation to the proximate cause of rheumatic inflammation, it is now generally admitted, that the seat of the inflammation is in the *fibrous textures*—more especially in the aponeuretic and tendinous structures of the body. It is manifest, moreover, that this inflammation differs very materially from the other varieties of inflammation; and the opinion of Scudamore, that it is *sui generis*, of a strictly specific character, is supported by its peculiar character and phenomena."

Is it not, however, more accordant with a correct pathology to ascribe the peculiarities exhibited by rheumatic inflammation, to the particular organization of the tissue in which it occurs, than to any supposed specific difference in its nature or cause? The phenomena of inflammation differ invariably, according to the structure of the parts in which it is seated. Inflammation of the fibrous tissues assumes invariably the same essential character, and we have no more reason for ascribing to it, on this account, a specific nature, than to either the inflammation of the skin, or of the cellular mucous or serous tissues, each of which differs from the others in the phenomena to which it gives rise.

The frequent and often rapid metastases which occur in rheumatism, Dr E. conceives to indicate "something radically distinct, if not in the inflammatory action itself, at least in its immediate or proximate cause."

"This circumstance, too, favours the opinion, that the disease consists in a peculiar diathesis, or general morbid condition of the system; the local inflammation being merely one of its effects or external manifestations."

The dependence of inflammation on "a general morbid condition of the system," in any instance, is a mere hypothesis, unsupported by any well established facts. If the circumstance of its liability to metastasis were to be taken as an evidence of this dependence, few cases of inflammations from any other cause would be found to exist, for there are certainly few in which metastasis may not occur.

In his account of the treatment of rheumatism, Dr E. makes the following remark, which corresponds perfectly with our own experience.

"Opium, under judicious management, is a valuable remedy in acute rheumatism. When employed in full doses, after proper venesection and purging, in combination with calomel, or with ipecacuanha, or tart. antim., it seldom fails to procure immediate relief, and to hasten the resolution of the local and general inflammatory action."

Gout is defined by our author to be "a constitutional affection, depending on a peculiar diathesis, and manifesting itself in its regular form by external local inflammation of the fibrous structures, and fever of the synochal grade." After an enumeration of some of the leading doctrines which have been advanced in relation to the pathology of gout, we are presented with the following as the author's own views:

"It can scarcely be doubted, that some defect or derangement of the reproductive functions lies at the bottom of the evil; and that this primary dynamic disorder, in conjunction with its consequent *humoral* depravation, constitutes the fundamental pathological condition of the system in gout."

The opinion thus obscurely worded is not further explained, nor is it attempted to be supported by facts or arguments.

The invariable and intimate connexion which exists between gout and an affection of the alimentary canal, especially of the stomach, is recognized by nearly all modern pathologists.

A disordered condition of the digestive function precedes for some time the onset of the disease, while each paroxysm is ushered in by pain or uneasiness at the epigastrium, a depraved or defective appetite, flatulence, acidity of stomach, a furred tongue, nausea, pain of the head, vertigo, &c. For some time previous to the attack it will be found that the patient's bowels have been costive, and it is not unfrequent, according to Scudamore and others, for a bilious vomiting and diarrhœa to be the immediate precursors of a paroxysm. "The stomach" says Cullen, who appears to have studied the disease with considerable attention, "which has so universal a consent with the rest of the system, is the internal part that is the most frequently, and often very considerably, affected by the gout. The paroxysms of the disease are commonly preceded by an affection of the stomach. Many of the exciting causes act first upon the stomach; and the symptoms of the atonic and retrocedent gout are most commonly and chiefly affections of the same organ." These circumstances, as might be expected, have led many of the modern writers to consider gout as primarily a disease of the stomach, or probably of the chylopoetic viscera generally. "The stomach" says Scudamore, "is truly the part in which the gout is produced." By Broussais and his followers this doctrine of the gastric origin of gout is, of course, adopted and strenuously maintained. In the peculiar language of this celebrated teacher, gout is an actual gastritis, or rather a gastro-arthritis. Dr Rush strongly contested the idea of the disease being located in any particular tissue or organ—it is, he declares, an affection of the whole system, it attacks the ligaments, blood-vessels, stomach, bowels, brain, liver, lymphatics, nerves, muscles, cartilages, bones and skin. Though, in a certain sense, the fact intended to be conveyed by this language may be admitted; yet, the mode of expression is so extremely vague, as to be liable to mislead. It is very evident that gout, take it for instance in its regular form, does not affect at one and the same time every organ and tissue of the system, and even if it did in its progress, this militates nothing against the idea of its strictly local origin. That organ in which symptoms of morbid derangement are first per-

ceptible, we cannot but consider as the one in which the dis ease commences, and through which it is extended to other parts. In gout, the first indications of disease, as we have seen, present themselves in the stomach; hence we are compelled to believe that this is the organ primarily affected and upon the morbid condition of which, and through its sympathetic influence upon other parts all the phenomena of the disease depend.

The space to which we are restricted will not permit us to enter fully into a defence of the opinion here advanced. From the same cause we are unable to discuss the points upon which we differ from Dr E., in regard to the treatment of gout: these, however, are fewer and less important than would be anticipated from the difference of our pathological views. We certainly attach a greater degree of importance to the employment, in this disease, of bleeding, both general and topical, than our author does: while we can conceive of very few cases indeed, in which we would venture upon the exhibition of an emetic.

When treating of the prophylactic means proper in gout, Dr E. very correctly observes:

"Little or no dependence is to be placed on any measures in this respect, except on such as are calculated to restore the healthy action of the stomach, liver, and skin; and especially on the adoption of proper regulations with regard to diet and exercise." Under the latter head he enumerates—"abstinence from high seasoned and very nourishing diet, and from all kinds of fermented liquors, with regular exercise in the open air."

To these we would add the equally important item—entire abstinence from every species of distilled liquors.

When gout attacks the stomach, Dr E. recommends, on the authority of Cullen, the administration of "heating and stimulating remedies," as "laudanum in large doses, (from eighty to one hundred drops) with warm spiced brandy, and a large sinapism over the stomach," as unquestionably the best practice in many cases. This may be correct when we are certain that the affection of the stomach is a simple gastralgia. But when, in gout, the local affection ceases suddenly in the feet, and is immediately followed by a disease of

the stomach, bearing all the characteristics of an inflammation of that organ, as is very frequently the case, then we insist not only that the remedies above recited are, as the doctor has admitted, improper, but that the life of the patient depends upon a prompt recourse to bleeding, leeches, and all the other remedies indicated in a case of ordinary gastritis, in conjunction with sinapisms or other stimulants to the extremities. "Although," remarks Guilbert, "the medical treatises make no mention of arthritic gastritis, yet we should consider it of extremely common occurrence. Our own observations, as well as the attentive perusal of medical writings, have enabled us to detect genuine cases of gastritis in those gouty affections of the stomach which are generally considered as purely nervous." Hoffman is almost the only one among the older writers who has recognized arthritic gastritis, and the extreme frequency of its occurrence; his opinions on this point will be found in a little treatise "*De inflammatione ventriculi frequentissima.*"

The chapters which succeed that on gout, are devoted to the exanthemata. With the exception of a few points, of the correctness of which strong doubts may be entertained, the opinions advocated by Dr E. in relation to the pathology of the diseases arranged under this head, will be found correct, and his directions for their management extremely judicious.

On the subject of varioloid, or modified small pox, our author refers exclusively to the statements of the English writers; particularly Thompson and Gregory. We regret to find him overlooking thus the experience of our own physicians in regard to this form of disease. The facts contained in the paper of Drs Mitchell and Bell on the epidemic small pox which occurred in this city in 1823—24*; the report of the Philadelphia Medical Society, on the epidemic of 1827—28†, and Dr Gibbons's sketch of the variolous epidemic which at the same period prevailed at Wilmington, Delaware‡, independent of others to be met with in contemporary publications, are certainly of sufficient importance to demand a collation with those furnished by the English, French, and German writers.

* See the second volume of this Journal.

† See No. 10, Ibid.

‡ See No. 18, Ibid.

From the opinion expressed at the close of the following paragraph, we must beg leave entirely to dissent.

"It is believed by many that the constitutional influence of the vaccine disease gradually lessens, until the system, though at first protected by it against the variolous contagion, regains in the course of years its original susceptibility to small pox, and this opinion is in fact strongly countenanced by the results of experience."

Ample opportunities have been afforded us for testing the preservative powers of vaccination, and we are enabled to say unhesitatingly, that whenever the system has been placed fully under the influence of the vaccine virus, it enjoys as perfect protection against an attack of small pox, after the lapse of twenty as of two years. It is true, that among a number of individuals, all of whom have been successfully vaccinated, and all equally exposed to the contagion of small pox, some will be attacked with the latter in its more or less modified form, while others will escape entirely. But this circumstance can only be referred to idiosyncrasy, it has no reference whatever to the length of time which has elapsed subsequently to vaccination.

"I am induced," says Dr E. from considerations previously stated, "in common with many others, to regard *varicella*, (or chicken pox,) as a variety of spurious or modified small pox, or at least as being referable, for its ultimate source, to the same contagion which produces this disease." In the correctness of this opinion we fully concur.

Dr Eberle admits the correctness of the old division of hemorrhages into active and passive.

"Hemorrhages are called passive," he remarks, "when there is neither sanguineous congestion, nor a sense of heat and fulness, but a *decreased*, instead of an *increased* vascular activity, both of the general system and of the part from which the hemorrhage occurs; the exhalents suffering the blood to escape passively, from want of vital activity to resist its entrance and transmission."

The author describes here a pathological condition which we deny ever to occur in spontaneous hemorrhages; but this point is so fully discussed in a paper by Dr Condie, contained in a former number of this Journal, (Vol. III. No. 2, p. 236) that it becomes unnecessary to enter into an examination of it on the present occasion.

The second volume opens with the consideration of the chronic nervous affections, including apoplexy and palsy, amaurosis, the convulsive diseases, mental derangement, &c.

The manner in which this portion of the work is executed, reflects great credit upon its author. Many of his positions may, undoubtedly, admit of not a little criticism; but this is true in relation to perhaps every other writer who has attempted an investigation of the diseases here embraced, nor is this surprising when we reflect that many even of the physiological points involved in their pathology remain as yet subjects of dispute. We cannot enter into any examination of the opinions advocated by our author,—the subject is so copious that a mere analysis would occupy many pages. In relation to the seat, nature, and treatment of hysteria, epilepsy, and asthma, he appears to have entirely overlooked the work of Georget, *Recherches sur les Maladies Nerveuses.* We are surprised to find, also, that he has omitted to treat of the convulsions of children. These are unquestionably mere sympathetic affections, but not more so than other diseases of the same class; while the frequency of their occurrence, the great importance in all cases of a prompt resort to efficient remedies, as well as the confused opinions which generally prevail upon their pathology and treatment, would seem to call for their separate consideration in a systematic treatise like the present.

Dr E. has given a very excellent chapter on delirium tremens; we are of opinion, however, that had he consulted the recent treatise of Barkhausen, *Beobachtungen über den Säuferwahnsinn**, he would have gained some important hints in relation to the pathology of this disease, and the treatment adapted to the several forms under which it occurs. Although we admit that opium is the chief remedy for delirium tremens, yet experience has taught us that many cases occur in which, from the great tendency there exists to cerebral congestion, opium cannot be administered with safety, until this tendency has been obviated by other remedies, especially by cups and cold applications to the head, and nauseating doses of tartarised antimony, or ipecacuanha. This fact is also strongly insisted upon by the author just referred to. Dr E.

* For a review of this work see Vol. VII. of this Journal, page 301.

speaks of "free purgation" in this disease: our own experience is decidedly against the use of purgatives to any extent, at least in the generality of cases; whenever we have employed them we have found them to be injurious.

Whooping cough is a disease of very great interest, as well from the mortality by which it is frequently attended, especially when it occurs as an epidemic, and its tendency even in its milder forms to call into action that peculiar morbid condition of the lungs upon which the production of tubercles depends, as from the degree of empiricism by which its treatment has heretofore been marked. The views of Dr E. in regard to its pathology, are summarily expressed in the following paragraphs.

"It appears to me that whooping cough is essentially a spasmodic or nervous affection, the proximate cause of which consists principally in a peculiar irritation of the eighth pair, or the pneumo-gastric nerves." "The peculiar tone of the cough, and the sense of constriction which is felt at the glottis, may arise from the irritation extending to the recurrent branches of the vagus nerve; and that this irritation is peculiar or specific in its character may be inferred from the nature of its exciting cause,"—a specific contagion.

This is very nearly the same opinion as that advocated by Hufeland, Jahn, Wendt, Bauer, and other German writers; it receives, however, little or no evidence in its support from the result of dissections. Breschet, it is true, detected a slight reddening of the pneumo-gastric nerve, but this occurred in only two of the cases which he examined. Bauer also mentions that in some instances he observed a diseased condition of the nerves of the lungs. But on referring to the dissections recorded by numerous writers*, it will be found that the mucous membrane of the bronchia and the brain are the parts in which morbid alterations most frequently exist in the bodies of those who fall victims to pertussis. According, however, to our author, many cases occur in which "no morbid appearances whatever are discovered on dissection, and there are good grounds for believing that the inflammation and other phenomena which have been detected on post mor-

* We have particular reference to those of Lettsom, Badham, Whatt, Webster, Hastings, Marcus, Malden, Coiter, Wardrop, Ozanam and Guibert.

tem examination, have no essential connexion with the disease, but are altogether adventitious or secondary."

This is a broad assertion, and scarcely tenable in opposition to the facts to which we have just alluded, or the arguments drawn from the phenomena of the disease itself. Desruelles, one of the latest writers on this disease, maintains that it is a bronchitis, which in its progress becomes complicated with a cerebral irritation and congestion—that this encephalic irritation assumes an intermittent form, and is the primary organic cause of the convulsive cough characteristic of the disease. He proposes, therefore, to designate the disease by the term *broncho-cephalitis**. The facts and arguments which may be adduced in favour of this pathology press it strongly upon our attention.

The dependence of whooping cough upon a specific contagion, as our author maintains, is far from being proved. Upon this question, however, we cannot now enter.

In the chapter devoted to *angina pectoris*, the author, in speaking of the remedies adapted for the relief of the paroxysms, observes that "Richter admits that much relief may sometimes be obtained from vomits; but he asserts that they may also really do a great deal of harm." Now unless it had been stated what were the peculiar circumstances under which the administration of emetics was found to be beneficial or injurious, the foregoing sentence conveys no useful information; on the contrary, it may lead young practitioners to try the effects of these remedies in cases in which they are absolutely injurious; we are happy to say that few sentences of so vague a character as the present occur in those portions of the work, at least, which treat of the cure of diseases.

The directions which Dr E. gives for the treatment of cholera infantum appear to us in some respects superior to those generally found in the books. The following, at least, is of very great importance.

"I generally commence the treatment with the application of from ten to twelve leeches to the temples, the exhibition of minute portions of calomel and ipecacuanha, and a large stimulating poultice over the abdomen. I am persuaded by what I

* Traité de la Coqueluche, &c. Paris, 1827. See a review of this work in the ninth volume of this Journal.

have repeatedly observed in my practice, that great benefit will in general result from local depletion from the head, as well as the application of blisters behind the ears, or on the back of the neck, in this affection. Within the last four years I have not treated an instance of this complaint in which I did not at once apply blisters behind the ears, and in most instances, it appeared to me, with unequivocal advantage. This, at least, I may confidently affirm, that since I have adopted this practice I have been much more successful in the management of this disease than previously.

We had marked for comment several passages in relation to some of the remaining subjects treated of in the second volume; but we have already exceeded our prescribed limits, and must here close. In running rapidly, as we have done, over the work of Dr Eberle, we have ventured to dissent freely from such of his opinions as appeared to us of doubtful authority. Our criticisms will, we are persuaded, be received by the author in the same spirit by which they were dictated. We regret that the space which these have occupied has prevented us from doing justice to those parts of the treatise which demand unqualified approbation. The talents, industry, and variety of research necessary for the production of a system of practical medicine, are possessed by few, and when we say, as we do with great candour, that the treatise before us will bear a very favourable comparison with any modern work of the same class, while it is far superior, as well in regard to the soundness of its pathological views, generally speaking, as to the excellence of its therapeutic precepts, to the more popular of the English systems, we confer upon it and its author no mean praise. Many of the objections to which, in our opinion, it is now liable, will, we have little doubt, be removed in the event of a second edition.

Art. VI.—RECAMIER'S TREATISE ON CANCER.

Recherches sur la traitement du Cancer, par la Compression Méthodique simple ou combinée, et sur l'histoire génerale de la même maladie: suivies de Notes, 1. *Sur les forces et la dynametrie vitales;* 2. *Sur l'inflammation et l'etat febrile. Par* J. C. A. Recamier, *Medecin de l'Hotel Dieu de Paris, Professor, &c. &c. Tom.* 1 *et* 2, *pp.* 560 *et* 731, *avec planches.*

One is almost astounded at the announcement of a monograph, which fills more pages than most writers have required to teach the whole practice of physic, and is ready to imagine that it is impossible to write so much upon one disease, without inserting much that is trite, trifling or irrelevant. Such were our impressions on taking the two massy volumes in hand, but not such are those left by the examination. The details are minute, but not trifling; they are not spun out of the brain of a mere closet speculator, but are such minute facts and observations, as constitute accurate knowledge. We know of no work which approaches nearer to being a good substitute for clinical observations, and it may be commended for its perspicuity and happy arrangement. The author, having stated the plan of his work in the preface, says, "thus, if the reader follow the order in which the materials are here presented, he will find himself associated with me in my researches, and in the same situation that I was in while collecting them."

It will be readily perceived how difficult, nay impossible, it is in the compass of a few pages to present any thing which would deserve the name of an analysis of 1300 pages. All we propose to do at present, is to notice the plan of the work, and to present such parts as seem to possess the most practical importance.

In 1817, a remarkable case of carcinomatous mamma came under the notice of Professor Récamier. Internal remedies had been tried without effect; and the volume of the tumour and the constitution of the patient precluded the idea of an operation. In this extremity he resorted to compression, a treatment hitherto not introduced into French practice, and

which was approved of by none of the most eminent English surgeons. Treatment by compression had been highly recommended by Mr Samuel Young; but the success of the trials of this practice by other English surgeons was such as they could account for only by supposing that Mr Young mistook the character of the disease. The effect of compression in that case made a strong impression on Mr Recamier, but the authorities, with the exception of Mr Young, were all so decided against it, that he continued the usual, and, as he considers, only palliative treatment until 1825; for cancers recur in so large a majority of cases after an operation, that all surgeons are brought by experience to refuse to operate in these dreadful cases.

In 1825 our author commenced a course of practice and observation, the detailed results of which constitute the work before us, and which are arranged in what may be considered an inductive method. Instead of first advancing his theories or general principles, and then adducing cases to confirm them, he first presents his facts or data, and then proceeds to his inductions, thereby giving the reader the best opportunity of judging of their fairness.

Part I. contains the history of sixty-two cases of cancerous breast. Part II. contains the history of thirteen cases of cancer in other parts of the body than the breast. To this part a supplement is added, containing two additional cases, and a further notice of some of the cases in Part First,—this supplement having been written subsequently to the printing of that part. The Second Part closes with a tabular recapitulation of the foregoing cases. These cases occupy more than four hundred pages, and are related with the most satisfactory completeness, precision and perspicuity. Part III. contains a classification of cancerous tumours of the breast; the treatment, both external and internal; a minute account of the excision of the uterus, illustrated with plates, and more than twenty additional cases. A short section, containing the principal results of the author's researches upon cancer, concludes this part, and likewise the first volume. Part IV. contains the author's researches upon the general history of cancerous diseases, and extends through two hundred and forty pages. The notes, which occupy the remainder of the

volume, as may be seen by a reference to the title of the work, have no immediate connexion with the subject of cancer.

It is a too common fault of authors and lecturers to consider it trifling, as a mechanical drudgery, which would degrade genius, to descend to minute details on the mode of using therapeutical agents, and to content themselves with announcing and discussing general principles and giving general directions. Such instructions may be sufficient for a few members of the profession; but there are many more, who, for want of precise directions in the employment of remedies, are never able to give them a fair trial. To this circumstance may often be attributed the contrariety of opinion entertained of the value of certain remedies. In regard to the employment of many of them, therefore, let it be remembered, the manner is every thing.

These remarks have been occasioned by an apprehension that some will tax us with tediousness, for giving the author's views so fully on a few points, and neglecting much more that would add to their variety and interest. But as M. Recamier's treatment appears to be a decided improvement, if we may judge of it by his reported success, and as it is improbable that it would be fairly tested by others without his precise directions, the interests of the profession and of humanity will be better subserved by entering into such details as shall enable the reader to *make a fair trial* of it, than by our skimming along rapidly, and giving such glimpses of all the prominent points, as to enable him merely to *talk* of the author's peculiarities. For all which follows, credit is due to the author, unless we should be so unfortunate as to obscure or misrepresent him; as no commentaries or criticisms of our own will be interposed.

All cancerous diseases of the mammary glands do not present the same aspect, and the author adopts the following classification of them:

1. Some form diffuse engorgements in the parenchyma of these organs.

2. Others constitute isolated tumours, which seem to involve the proper tissue of the breasts only consecutively.

3. Others partake of the characters of parenchymatous engorgement and of isolated tumours.

4. Others have, as their most prominent phenomenon, local neuralgic pains, which either precede or accompany the development of the engorgements or the tumours.

5. Others, with engorgements, tumours and pains, present softenings (*ramollissemens*), or ulcers, more or less superficial or deep, but always possessing the refractory character of cancerous affections.

These distinctions the author considers essential in reference both to the prognosis and the treatment.

1. *Diffuse engorgements.*—In diffuse engorgements, the parenchyma of the organ acquires density, is changed, becoming at first scirrhous, then encephaloid, &c. The disease commences indifferently at the centre or circumference of the organ, without our being able always to determine its limits exactly by the touch. It is often preceded by kernels of greater or less density, which resemble circumscribed tumours. In these cases there is a sort of transformation of the normal tissue into scirrhous or cerebriform parenchyma, in different degrees, and of either a homogeneous or heterogeneous aspect. When the engorgement presents these characters, partial excisions of the diseased organ are commonly followed by a relapse; or rather the same affection continues to be developed in portions of the same organ, which had been saved as being sound.

When a gentle, equal and continued compression is applied to this kind of engorgement, if the density diminishes at the same time in the whole extent of the tumour, and the organ return to its normal state, without atrophy, and without there remaining an isolated and dense kernel, we may hope for entire success.

If the engorgement diminish, leaving a distinct kernel, which increases in density, it takes on the condition of circumscribed tumours. If, instead of being resolved or becoming circumscribed, the engorgement invades other parts of the affected organ, the result of the treatment will not be favourable, whatever external or internal means may be employed.

If the nature of the parenchyma is not altered, resolution takes place in this sort of engorgements in some weeks, and if the disease be farther advanced, in three or four months; but if disorganization have supervened, resolution becomes

more and more difficult. The more the organization is altered, the less susceptible is it of return to its normal state; and the only resource left is atrophy or excision.

II. *Circumscribed tumours.*—This class of cancerous affection is characterized by an isolated tumour, either movable or adherent, whether it have its seat in a part of the breast, or occupy the whole mammary gland, or have its seat in the cellular tissue without the gland. In all these cases, the tumour appears to constitute, from the first, a scirrhous or carcinomatous engorgement, however small may be its volume. It is easy to determine, by the touch, the limits of this sort of tumours, which, left to themselves, extend, contract adhesions with neighbouring parts, and assimilate them to themselves.

The resolution of these tumours, treated by compression, is so much the more difficult, as they are more dense and isolated; it is not always possible, but may be accomplished in some cases. When the result is to be favourable, the tumour gradually ceases to be limited, and its kernel, instead of acquiring density, loses it daily. From this, it is perceived, that in circumscribed tumours, decisive success is obtained, by compression, only by bringing them to the condition of diffuse engorgement.

When these tumours are not encysted, and they are extirpated, they commonly sprout anew. When, on the contrary, they are compressed, the whole periphery of the tumour is resolved in such a manner as to leave a kernel, which becomes more and more dense, and is gradually changed into a fibrous substance, more or less compact, without the parenchyma of the affected organ being restored.

There are some cases where the volume and density of the tumour deprive it of the action of compression. Resolution in these cases, when it takes place, is slow, and we arrive at a kernel, which resists a great while, and is changed into fibrocellular tissue only after a long time. Circumscribed engorgements, where resolution stops, under the use of compression, by the formation of a kernel, more or less refractory, proceed like extraordinary tissues or *nævi:* we can destroy or reduce them by compression, but we can never bring them back to the normal state, because there is a limit where the texture of

organs, on account of the changes they have undergone, is no more susceptible of returning to its primitive state.

III. *Simultaneous diffuse engorgements and circumscribed tumours of the breast.*—In very fleshy persons, a circumscribed tumour in a mammary gland is often associated with a general affection of the organ and of the cellular tissue which surrounds it; and there is consecutively associated with it engorgement of the lymphatic ganglions, and even of the opposite mammary gland. If this sort of tumours be compressed, a part of the diffuse engorgement is dissipated, but the principal kernel resists, and obstinate infiltrations supervene in the neighbourhood; if an operation be performed, there is a relapse, whether compression be employed after the operation, or not until after some delay.

IV. *Tumours or engorgements accompanied with neuralgia.*—In very irritable subjects, engorgements are sometimes developed, in which neuralgic pains form a principal trait in the disease, whether they precede or follow it. The author has seen neuralgia precede by several years, not only the cancerous engorgements of the breasts, but likewise those of other organs. Engorgements and tumours of this sort are very refractory.

V. *Tumours with softening.*—In whatever manner the disease may commence, there are cases where, when medical aid is first required, points of softening are found to exist. In this state, compression appears to be useful only for disgorging the circumference of the tumour, in order to proceed afterwards with more facility to extirpation, if we have not already to manage a case of relapse. Compression upon a softened kernel is never successful.

VI. *Ulcerated cancerous tumours.*—In eight cases, Professor Recamier was not consulted, until after the ulceration of the cancerous tumours. Compression, in this case, did not seem to him applicable with advantage, before he had got rid of the ulcer, and his success was the more decisive, in proportion as the riddance was more complete.

Treatment.—Should it be eventually proved that cancerous tumours and engorgements, which disappear by the simple means of compression, do not return; as those do which are destroyed by excision, cauterization and ligature, with what-

ever care these operations may be performed; compression must render important services in the treatment of cancerous tumours, the prognosis of which has been little changed by the result of *other* operations and therapeutic agents; for cancers sprout anew in so great a number of cases, that this disease becomes a *noli me tangere* to every surgeon in proportion as he is impressed with the inutility of his efforts to prevent a relapse after excision. Our author confirms his opinion of the very rare utility of cutting out cancerous tumours, by quoting the authority of Boyer, whom it would be very advisable for every one to study attentively, who is ambitious to be an operator.

External treatment. Compression.—Upon whatever part compression is applied, it should be gentle and perfectly equal upon all points, except such increase of pressure as circumstances alone can indicate. Linen rags, lint, chamois-leather, and every thing which readily hardens by pressure are unsuitable. Agaric in fine leaves, very even, thick, if the tumours have much prominence, and thin, if they have none, or have lost it, is esteemed by professor Recamier as the most suitable substance, and that which best preserves its elasticity. The trials which he has made with the dressed skins of the deer, chamois and sheep, with cotton wadding, and with bladders inclosed in a leather bag and distended, have produced no satisfactory results. The same results have been obtained from the use of thin plates of gum elastic, lead and tin, which, being impermeable to transpiration, maintain upon the part a hurtful moisture. The author likewise rejects the use of elastic bandages with cushions, for fear of changing the conformation of the thorax, and on account of the difficulty of effecting the necessary modifications in the cushions.

The author employs for the breasts two bands, which are commonly two inches and a half wide, and from ten to twelve yards long, without either hem or projecting seams. He has employed flannel in making them, which is elastic and very easily adjusted; but as this bandage sometimes occasions a distressing heat, he prefers bands of linen or percale. For persons rather fleshy, one of the bands ought to be about three inches and the other only two inches wide. The broader of the two is employed to secure the first layers of agaric, and

to sustain the breasts; the narrow one is easily applied so as to produce a very equal pressure.

Professor Recamier first places a broad layer (*disque*) of agaric immediately upon each breast; he afterwards constructs upon the diseased breast a truncated cone, by means of other layers interposed, (one at a time if they are thick, and two, three or more layers if they are thin,) between the successive turns of the bandage. The cone, with an elevation of three or four inches, should be so constructed, that the centre of the pressure may fall upon that part of the base of the cone which corresponds to the point of the tumour which requires the most pressure. If the tumour be very prominent, the author employs a very thick and supple lamina; or from four to six of them together: then he takes thinner laminæ, or diminishes the number, so that the tumour may not be entirely imbedded in the base of the cone of agaric; and he finishes the treatment by making the base of the cone a little convex, by interposing between the broad laminæ some narrower ones, which occasions the centre to project so as to act upon the last remains of the engorgement.

If the tumour have several prominent points, after having placed the laminæ which embrace the whole of it, the author constructs upon each of the principal eminences a small truncated cone, and finishes the dressing by applying broad laminæ, which reunite the summits of all the small cones in such a manner as to form only one.

Engorgements in the axillæ are often compressed with difficulty, and it is indeed upon the treatment of these engorgements that the whole difficulty sometimes turns. Professor Recamier has been able to produce compression in these cases only by means of compresses made in the following manner. He cuts a lamina in the form of a right angled triangle; upon this he cuts a second, which is less extended towards its long side; he thus cuts successively eight, ten, twelve, twenty, thirty, &c. always diminishing them on the long side, and leaving them parallel at their right angle, which is rounded in order to accommodate it to the hollow of the arm-pit. In this manner he prepares a compress in the form of a truncated pyramid, and secures it there by turns of a bandage carried in

form of the figure 8 around the shoulders and axillæ, which are protected by means of soft agaric from the immediate action of the turns of the bandage, which the arm wrinkles and hardens by approaching the body. This compress, accommodated to different cases by its dimensions, its form and thickness, has been found very serviceable. The pieces of which it is formed are fastened together by a strong thread, sometimes making the summit towards one of the angles, and sometimes in the middle, according as circumstances shall require for its compressing the engorgement in the best manner. Those cases where the tumour escapes under the pectoralis major demand a cushion placed upon the external part of the subclavian region.

There are persons who endure pressure neither on the upper nor lower part of the sternum. In such cases, Professor Recamier applies the bandage obliquely, and describes three modes of doing it, which being somewhat tedious and intricate we shall omit, as he justly observes that these bandages vary in a thousand ways, and a person will hardly be able to apply them twice alike. The important point is, he says, not to repeat in a servile manner always the same turns of the bandage, but to devise, each time, the means of applying them more evenly, and in a manner as little distressing as possible. The constriction should be carried only to a very moderate degree, especially in the commencement, for otherwise a fever might be brought on, which happened in some of the author's cases.

The head of the patient should be laid high during the whole time the bandage is employed, and if baths are made use of they ought to be taken immediately before the hour for renewing the bandage.

When the disease shall be terminated, the bandage should be discontinued only in a gradual manner, by diminishing slowly the number of laminæ; and compression should not be entirely left off until several weeks after the complete restoration of the engorgement, even though it were of recent origin and have been easily resolved; while, if restoration has been slowly accomplished, or the engorgement has been of long standing, it should be discontinued only after many months.

The compression of other cancers than those of the mam-

mary glands should be accomplished with appropriate apparatus; but it is impossible to lay down precise rules for this purpose, each region of the body and each form of the tumour requiring special modifications. Elastic bandages may be employed in the treatment of cancers of the face, and the author thinks, also, that for sarcocele, we ought to use concave and elastic cushions. His trials upon affections of the scrotum have hitherto been confined to suspensory bandages, in which he has put agaric. By this means he has cured hydrocele.

II. *Cauterization.*—For cauterization, Professor Récamier employs the concentrated nitric acid, to each ounce of which he adds half a drachm or a drachm of crystallized nitrate of mercury. He places the part to be cauterized in the situation most favourable for keeping the caustic applied to it, and employs a quantity of the nitrate proportioned to the extent which he intends to give to the eschars. He applies the caustic liquor by means of dossils of lint, held in a pair of dressing forceps. If he wishes the caustic to act to a considerable depth, he allows the dossils to remain on the parts to be cauterized, pressing from time to time upon the lint with the extremity of the forceps, and watching at the same time the neighbouring skin, which he wipes immediately with soft linen, if the caustic should spread.

This mode of cauterizing has the inconvenience of producing a very acute pain, which continues a long time. When the cauterization is very extensive, a fever may supervene, which is to be combatted by bathing and by cooling drinks. When the cauterization is done, the pain is assuaged by applying to the part dossils of lint, soaked in a strong solution of opium. Verjuice, combined with opiate preparations, has appeared to the author to increase their anodyne properties. If the pain of the inflammation, which accompanies the separation of the eschars, should become very severe, he employs emollient poultices, leeches around the inflamed part, and even blood-letting and all the antiphlogistic means.

After cauterization by caustic potash, as well as by nitrate of mercury, unless it should be very painful, compression should be continued, proportioning it to the susceptibility of patients. The author applies to the eschars powdered charcoal, adding to it sometimes red bark, and likewise camphor,

if the aspect of the granulations be not good. The sore is easily cleansed by a stream of water from a common syringe, and this method is less painful than wiping it. When the sore assumes a favourable appearance, the author exchanges the use of charcoal for dry lint, or very soft and washed agaric, which he employs dry, or soaked in oil of sweet almonds, mixed with one-eighth of lemon juice. When there is much suppuration, the dressing should be renewed twice a day. He thinks, when caustics are employed, the diseased tissue should e entirely destroyed.

When the progress of the disease is very rapid, and when cauterization is thought preferable to excision, it is not necessary to wait for the eschars to drop off, but to remove them and cauterize immediately, in order to suspend the compression as short a time as possible.

If, besides an engorgement of considerable duration, already softened and ulcerated, there be found towards the axilla another engorgement of a bad character and rapid in its progress, a large opening should be immediately made with caustic potash, at the most prominent point of the secondary tumour, in order to be able to destroy it afterwards more easily. When a longitudinal eschar has been formed, an incision must be made, penetrating the centre of the tumour; if it is softened, a part of it is removed, and the rest destroyed by the nitrate of mercury. It is dressed by compression, from the circumference towards the centre, and especially towards the armpit.

If the fleshy granulations should become pale in the course of the treatment, they may be revived by a mixture of oil of sweet almonds and lemon juice, or with honey of roses. The aqueous solution of sulphate of iron is regarded by the author as a useful lotion in some cases; and he has employed also lotions of sulphate of copper, sulphate of zinc, acetate of lead, &c. but not enough to give any positive results.

Cauterization of fungus, and of the cancerous edges of ulcers of the uterus, is executed with the nitrate of mercury, by means of a *speculum* of tin well adjusted and of convenient dimensions—observing as much as possible to place the patient in such a manner, that the surface to be cauterized may be directed upwards, in order that it may serve as a floor or re-

ceptacle for the caustic, which would thus act more on the part. During the cauterization, be particular not to let go the speculum, lest the caustic should escape upon the adjoining parts. Have constantly a syringe filled with warm water, for injection immediately into the speculum, when it is desired to diminish the action of the caustic, or to moderate the heat of the instrument evolved by the application to it of the acid. Long curved dressing forceps are necessary, such as can be managed with facility at the bottom of the speculum, for applying dossils charged with the nitrate, and for cleansing the part.

As the pain of cauterizing the neck of the uterus may strongly affect the sacral nerves, it is necessary to recur to bathing, and to continue the irrigations with warm water; compression is to be made by means of a cushion, constructed of soft linen and bran, and representing a sort of stopper or plug, at the extremity of which a loop of riband is fixed, which is allowed to hang about an inch beyond the vulva; by this means, the patient herself can withdraw the plug, and introduce another. In one case, the author applied a bandage around the body, with a bag of oat-chaff as a pad to the lower part of the abdomen, in order to depress the uterus and favour the action of the plug introduced into the vagina.

When Professor Recamier discovers any density in the skin, upon which a cancerous ulcer reposes, he cuts out all the diseased part, making the incision in the sound skin, and applies a dry dressing the first day; on the second or third day, he cauterizes deeply, with the concentrated liquid nitrate of mercury.

III. *Excision.*—To the question, whether excision ought to be preferred to cauterization—the author replies, that the greater facility of removing the *whole* apparent disease by the former, and the impossibility of accomplishing this in all cases by the latter, seems at first to decide the question in the affirmative. But when it is ascertained that relapses occur more promptly after excision alone than after cauterization, done either before or after excision, we shall be led to examine this question more closely, in order to determine in what cases one of these means is to be preferred to the other, and where it would be beneficial to combine them.

The author has employed compression and cauterization, before resorting to excision, in five cases; and it is remarkable, he says, that in none of these cases has there been a return of the disease. This combination of compression, cauterization and excision is certainly very painful; but if this method be more sure, it ought to be preferred. The pain of cauterization stimulates, developes the pulse, and produces fever; while the pain of incision contracts the pulse and produces a state of faintish and spasmodic chillness, from which some persons cannot be restored. The pain of tearing in enucliation seems to hold the medium, in its effects on the organic structure, between that of cauterization and that of excision.

The nitrate of mercury, the employment of which is followed by the collapse of engorged lymphatic ganglions, besides its *local* action, having a greater affinity for diseased than for healthy tissues, may have a *general* action resulting from its absorption; for it sometimes produces ptyalism. Besides, it is possible, that the pain of cauterization, when it cannot be made use of to destroy the whole tumour, may diminish the susceptibility of the organic structure to a relapse, after the excision of the remainder. Until new observations shall indicate otherwise, the author advises, in circumstances analogous to many of his cases, which he indicates, that excision should be preceded by cauterization.

IV. *Dress.*—The choice of the materials of dress does not appear to be indifferent in the treatment of cancers. The author refers to one of his cases where a derangement in the perspiration of the feet was attended with great inconvenience. There are, he says, habitual perspirations, either local or general, of the groins, the perineum, the armpits, the ears, &c. the suppression of which may produce results more or less troublesome; and besides, there are simple local transpirations, which it is useful to maintain or to recal. This object is obtained by placing upon the part where it is desired to produce transpiration, sometimes wool, sometimes impermeable substances, which keep the part upon which they are applied in a local bath, by retaining upon the surface of the skin the fluid of transpiration. Thus I have, says the author, met with some cases in which the re-establishment of the transpiration of the feet has been followed by the cure of chro-

nic ulcers of the nose, which threatened to become phagadenic; of engorgements of the breast and uterus, and of epigastric tumours with vomiting, &c.

The integuments of the breasts, which in general suffer from the contact of impermeable tissues, bear very well that of rabbit skin and swan skin, of flannel and other substances, which are bad conductors of caloric, and have been employed as topical means upon chronic engorgements of the breasts, sometimes with unexpected advantage. After detailing some cases, the author says, "from these facts, and others which I cannot detail in this place, I conclude that with persons having cancerous affections, or affections susceptible of becoming such, the selection of the materials of dress is not a matter of indifference."

Internal treatment.—Storck and Collin have obtained, at Vienna, undoubted success with the extract of cicuta; while the want of success with it in France has occasioned it to be decried there, although habit still continues it in use. To settle, for himself, this difference in results, from the first years of his practice the author has examined comparatively the *modus operandi* of cicuta, sometimes putting no restraint on the patient's diet, and sometimes restricting them to a very light and severe regimen, and consequently well suited to reduce them. Since 1802 he has known that the effects of cicuta differed very much according to the quantity of aliment he allowed. In cases where cicuta was employed with a nutritious diet, it produced almost no effect upon the different chronic engorgements, while the effect was very evident when a great part of the ordinary aliment was retrenched. Since that time, the author has been collecting a great number of facts relative to the resolution of engorgements of the uterus, the liver, the spleen, the breasts, the testicles and the limbs, by the method here detailed.

Impressed with this difference, he meditated on the advice of Callissen upon the subject of *cura famis*, followed his method, and ascertained that, if cicuta is often not beneficial, it is not because it is an inert remedy, but that, for obtaining all its possible advantages, it is absolutely necessary that its employment should be joined to a very severe regimen.

More recently, with Hallé, he employed cicuta in substance, in the form of extract; and after that he caused extract of

cicuta to be prepared by M. Caventou, by submitting this plant to coction in acetic or alcoholic vapour, before expressing the juice, which is afterwards to be evaporated in a water bath to the consistence of extract. He was led to this new process by reflecting on the superiority of leguminous plants cooked in steam over those cooked in water. This process gives an extract which has none of the strong nauseous odour of the ordinary extract of cicuta, to which it seems to be in no respect inferior as a resolvent, and over which it has invariably the advantage of being always better borne on the stomach, and by which the author has even seen the deranged functions of that organ restored.

Professor Recamier employs cicuta on a starving regimen (dans le *cura famis*) in the following manner:—

1. The patient takes a dose of the extract of cicuta morning and evening, two hours before the first meal, and two hours before the last meal, beginning with half a grain, and increasing gradually to six grains at each dose. He continues this dose from eight to fifteen days, in order to habituate the organs to the remedy; after this he increases the quantity to fifteen grains each time, with which dose he continues two, three or four weeks, because that is large enough to be effective. Callissen did not proceed so far; but our author thinks he has ascertained that, in many cases, it is not necessary to stop at the dose which that author has mentioned.

2. After each dose of cicuta, as well as at meals, Professor Recamier directs to drink, instead of simple water, of a decoction of China root, prepared in the proportion of half an ounce to two pounds of water.

3. He allows only one third of the ordinary quantity of aliment, which is very simple, and divided into three small meals.

4. If cicuta does not answer under one form, he employs it under another, or he substitutes for it the extract of aconitum, prepared with steam, giving it in a smaller dose than that of cicuta.

5. When the China root is disagreeable to patients, he substitutes for it burdock (*arctium lappa*), or spleenwort (*asplenium ceterach*), if there is a disposition to diarrhea; and monk's rhubarb (*rumex patientia*), or soapwort (*saponaria officin.*), if there is constipation. In some cases he employs sarsaparilla, guaiacum, sassafras, &c.

6. With the internal treatment he combines the use of poultices or plasters, as well as general bathing, and prescribes the dress, habitation and exercise which seem to him proper to favour success.

7. He watches carefully how patients bear the treatment; for there is a limit in the diminution of aliment to the dose of cicuta, and a choice in the accessary means; in short, a time for the duration of the treatment, at which it is necessary to stop, in order not to endanger the vital resistance by enfeebling the constitution too much. At the close of the treatment he diminishes gradually the dose of cicuta and the strictness of the regimen.

This treatment was followed rigorously in several cases which he relates, by persons who have subsequently enjoyed good health.

Professor Recamier gives the following directions upon the use of certain other therapeutical means.

1. Showering from a watering pot, directed obliquely upon the breasts, has appeared to favour resolution in some cases. He prefers the use of the artificial *Eau de Plombières.* The bandage must be reapplied immediately after showering.

2. He has employed, upon engorgements of the breasts, cicuta, to which he has added half a drachm of saffron, and from a scruple to half a drachm of hydriodate of potash to the ounce. He protects the nipple against its action by a small disk of agaric. The ointment and bandage are renewed at the same time. He is not confident that this ointment has accelerated the progress of the cure.

3. After the treatment is terminated, especially when the disease has been of long standing, he establishes an issue in the arm or leg. It should not be applied to the arm of the side on which the lymphatic glands of the axilla have been engorged.

4. With issues he has employed mild laxatives, at first once a week, and afterwards at more and more distant intervals.

5. It is his opinion that mineral waters, used in baths, in showering, and internally, would be useful to many persons to favour the action of compression, and to secure the permanence of the success obtained by this means.

The history of almost all mineral waters furnishes examples

of resolution of engorgements of the breast, and he is acquainted with some remarkable ones by the waters of Plombiéres. Although chronic inflammatory tumours may perhaps have been mistaken for scirrhous tumours, the use of mineral waters being often proper to restore and maintain in its normal state the nutrition of the breasts, the uterus, &c., when they become engorged, this means may contribute to confirm the cure of persons who shall make use of it.

6. The author is afraid to employ arsenical preparations, especially in the neighbourhood of the nose and mouth, and appears to have had little experience with it, but he quotes a case wherein it was used with success externally in the St Louis hospital.

We shall conclude this article by presenting the *general results* of the author's researches upon cancer.

1st. Of the one hundred patients who have come to him to be treated for cancerous affections, sixteen appeared to be entirely incurable. Of the remaining eighty-four, thirty have been completely cured by compression alone: twenty-one, upon whom compression was employed, experienced only an amelioration, but a very notable one: fifteen have had cancers extirpated, either by excision alone, or rather by excision combined with compression: six have had them removed by compression combined with cauterization: in the other twelve cases, the affection was absolutely unyielding.

2d. Some tumours, similar, or at least analogous to those which degenerate into incurable cancers, got well by methoddical compression and by some other external and internal means.

3d. When compression has given, during a long time, to mammary engorgements, which have not yet degenerated, an impulsion towards resolution, this continues even after the discontinuance of compression; but if the engorgement has degenerated, and if, after having obtained a great diminution, we leave off compressing the remaining hard and isolated kernel, we must expect the engorgement to regain its former volume, and its degeneration to proceed more rapidly.

4th. Compression may assist in preventing relapses after excision.

5th. The advantages derived from compression upon the

remains of an ulcerated cancer in one of the author's cases, are not obtained in the same degree in some analogous cases.

6th. Resolution of chronic mammitis is very much promoted by compression alone, or associated with local bleeding, &c. &c.

7th. Different uterine engorgements are resolved, by compressing the uterus by means of a pessary made in the form of a hollow cone, and pierced at its extremity.

8th. The os tincæ and the uterus, having become cancerous, may be removed with safety, as long as the disease is circumscribed.

9th. From these results, the author thinks himself allowed to conclude that, if compression be employed early, that is, before the degeneration of the engorgements which are susceptible of it, a great number of them may be resolved; and that the excision of cancers of the breast, so often followed by a relapse, when the tumours are not encysted, will become more and more rare.

Of one hundred cases, two occurred in males and ninety-eight in females: fifty in the left breast; thirty-three in the right breast; three in both breasts; five in the uterus; three in the face; one in the tongue; one in the back; one in the rectum; one in the stomach.

Of the sixty-two patients affected with cancer in the breast, whose histories are contained in Part I. sixteen had received blows on the part; thirty-nine had experienced no local violence; five have had, in their families, persons affected with it; two, who might be supposed to have inherited it, had received blows; twenty-one had axillary engorgements; four had subclavicular engorgements; and three had supra-clavicular engorgements.

ART. VII.—NEW YORK PHARMACOPŒIA.

"*The Pharmacopœia of the United States of America: by the authority of the General Convention for the Formation of the American Pharmacopœia, held in* 1830. *Second edition—from the first edition, published in* 1820, *with additions and corrections. New York, November* 1830."

A book has within a few days come into our hands, purporting, as appears from its title page, to be a second edition of the Pharmacopœia of the United States, "by the authority of the general convention for the *formation* of the American Pharmacopœia, held in 1830." We had heard of the medical convention which met at Washington for the purpose of *forming* a national Pharmacopœia in the year 1820; and of another which assembled ten years afterwards in the same place for the *revision* of the work put forth by the original convention. Some rumours, moreover, had reached us of a meeting of three or four individuals in New York, claiming authority to revise and republish the Pharmacopœia of the United States; but we were wholly ignorant, till better informed by the title page of the work before us, that any general convention had recently been held in any part of the union with power to originate a work of this kind. But it is possible that the statement in the title page is a mistake in phraseology: and upon consulting the preface of the book, we are inclined to think that this is really the case, though it must be confessed that an error of so grave a character, in the very outset, speaks unfavourably for a work, the usefulness of which must depend so much upon its accuracy. From the preface it does in fact appear, that the body, from which the work proceeds, claims no other right than that of revision and republication; and upon a little consideration it must be evident, that in thus restricting its powers, it has exhibited signal moderation, as there can be no doubt that, upon the same grounds that it has exercised this privilege, it might have made not only a new pharmacopœia, but even new laws for the union.

It may be asked, of whom this convention, possessing such extensive powers, and claiming to represent the whole me-

dical profession of the United States, was composed. As to the number of gentlemen present at the first session, we are left altogether to conjecture. The subject is involved in deep mystery; and every one knows that objects thus shrouded have a tendency to exhibit themselves to the imagination in greatly expanded dimensions. Perhaps we may be under this exaggerating influence when we state our impression, that probably four individuals were present, of whom three had a right to a seat in the general convention at Washington, had they been disposed to proceed thither at the time appointed. We confess, however, that we do not advance this opinion with confidence; for we have no positive evidence of the presence of more than two gentlemen, one of whom acted as president, and the other as secretary;—and the president, we are moreover constrained to allow, had no more right to a seat in the convention, at least as a representative of any body of physicians, than any other medical man on this side of the Atlantic. With that extraordinary degree of diffidence which has characterized all their proceedings, the convention concluded, that in their present condition, they could not fairly be considered as representing more than one-half of the United States, including New England, New York, New Jersey, Pennsylvania, Delaware, Maryland, and the District of Columbia. To give, therefore, an undoubted sanction to their authority, they adjourned for five months, directing that in the mean time circulars should "be sent to each of the medical societies and medical institutions in the United States," without the limits above mentioned, requesting the appointment of a delegate to co-operate with the convention at its next session. This took place at the time appointed; and a gentleman from Cincinnati, and another from Charleston, S. C. appeared and took their seats. We are not told, however, that they appeared as delegates; and have reason to believe that the profession in Charleston at least, did not consider itself represented at New York when the convention assembled. With these recruits, and with the addition of several volunteers, the convention became sensible of its strength, and proceeded at once *in medias res.* It consisted, besides the two gentlemen from the south and west, of two from Yale College, one from the Berkshire medical institution, and five resident

physicians of the city of New York, which was thus very fairly balanced against the union. In the mean time, the great majority of the states, among which our own was not the least, were resting in utter ignorance of these proceedings; several of them in fact considering themselves represented in the medical convention which was held at Washington.

The work before us is the offspring of the New York convention; and would appear to partake in no little degree of the unpresuming character of its parent. This at least might be inferred, from the mode of its entrance among us. No formal proclamation in the public papers preceded its arrival; no laudatory paragraphs set forth its origin and merits; it came within our walls in the same modest silence and secrecy which had presided over its birth; and it had been some time in the midst of us without having been discovered even by the booksellers. It first showed itself cautiously to the apothecaries, going about from shop to shop, and offering its merits humbly to their attention. But people are too blind to the worth which is not ostentatiously displayed; and so it happened in the present instance. We are apt to attach an idea of meanness to humility: and the conviction no doubt very unjustly arose in the minds of those who came to hear of the new Pharmacopœia, that the object in this shrinking avoidance of general notice, was to enable it to insinuate itself into the possession of those who were expecting a work of the kind, and might not readily distinguish between the spurious and genuine. This unfortunate impression, or some other cause, has prevented the sale of the book: and, it is to be feared, that unless its merits are more loudly proclaimed, it may leave us with the same secrecy that attended its arrival. We propose, therefore, as fully as our limits will allow, to present an account of its contents:—and, should faults as well as excellencies be discovered, we cannot, as faithful reviewers, shrink from the duty of pointing them out to our readers.

We have hitherto proceeded no further than the preface. Before leaving it we will make a single quotation, from which our readers will, no doubt, draw inferences favourable to the character of the work.

"Without going into any detailed specifications on the subject," say the gentlemen of the convention, "it is proper to

state, that while no *unnecessary changes have been introduced, every endeavour has been made to render the present condition of the Pharmacopœia worthy of the profession in this country, and of the present advanced state of medical knowledge.*" Should it appear, therefore, that there are deficiencies in the work, the result must be attributed rather to the misfortune than the fault of the compilers; as we are bound to believe that they have exerted themselves to the extent of their knowledge and capacity.

One of the first circumstances that engaged our attention in its perusal, was the change which has been made in the arrangement of the catalogue of the materia medica. One of the characteristics of the Pharmacopœia of the United States, is a division of medicines into those strictly officinal—that is, such as are either employed in pharmaceutic processes, or are generally recognized as important therapeutical agents; and into those which, though employed by a few practitioners, or in certain districts of country, and probably in many instances possessed of valuable properties, have not yet received the sanction of general approval. We have always considered this arrangement as exceedingly convenient, allowing the retention of remedies which might otherwise be deemed by the majority cumbersome to the materia medica, and at the same time presenting them in a manner to indicate their relative standing. We confess, therefore, that we cannot but consider the rejection of a secondary list, as at best "an unnecessary change," in consequence of which, at least seventeen remedies, occasionally employed, have been wholly omitted, as unworthy a place in the materia medica.

Another change, which struck us even more forcibly, is that of the nomenclature. One of the strongest recommendations of the United States Pharmacopœia, in our eyes, and one which goes far to counterbalance numerous defects, the natural consequence of haste in its formation, is the simplicity of nomenclature which it introduced. This is, perhaps, its prominent characteristic, and honourably distinguishes it from all other works of the kind. One expressive title is, whenever possible, given to each medicine, derived either from common usage or the scientific name of the plant or animal from which the medicine is procured. Thus we have *aloe* instead of *aloes extractum*

—*cinchona* instead of *cinchonæ cortex*—*assafœtida* instead of *assafœtidæ gummi-resina*—*petroselinum* instead of *apii petroselini radix*. All this, however, is changed; and the old cumbersome nomenclature has been restored, without any merit, that we can dicover, to recommend it. We are told that the names in the first column are those considered strictly officinal, and we have a right to suppose that they will be employed in all parts of the work in which there is occasion to mention the medicines they respectively designate. Thus, *anthemidis flores*, *assafœtidæ gummi-resina*, *colocynthidis pulpa*, *ipecacuanhæ radix*, *lini usitatissimi semina*, *&c. &c.* being placed as officinal titles in the list of the materia medica, should be retained whenever afterwards in the pharmaceutic processes there is occasion to refer to them. Any other plan would be attended with almost inextricable confusion; and yet the editors of the New York Pharmacopœia have paid the high compliment to the reader's understanding to suppose that he would require no such uniformity of nomenclature to assist him in ascertaining their intentions on all occasions. In the great majority of their formulæ they have left the former names unaltered, trusting to the reader's sagacity for the discovery of their meaning, as he would in vain look for it in any part of the work itself. Let us cite a few examples. Their officinal title for foxglove is *digitalis folia et semina*. In the infusion of foxglove, they direct simply *digitalis*, copying in this respect the United States Pharmacopœia. Do they mean the leaves, or the seeds, or the whole plant? The last is the necessary inference from the language, though the knowledge of the reader, which is trusted to on the occasion, would probably lead him to the correct conclusion. In the United States Pharmacopœia, *digitalis* is the proper officinal title, and is defined in the materia medica to signify the leaves of the plant. *Anthemidis flores* is their name for chamomile, but in their infusion of chamomile, they direct *anthemis*, in other words, the whole plant. They use *colocynthidis pulpa* to express the medullary portion of the fruit of the bitter cucumber; and yet in their directions for the compound extract of colocynth, they make use of the simple term *colocynthis*, thus ordering the whole plant, or at least the fruit as it is kept in the shops, containing seeds as well as medullary matter;

while it is well known that the latter part only should be used. We might proceed multiplying instances through a space as extensive as the Pharmacopœia itself; for this discordance of nomenclature pervades the work, and may indeed be said to give it a distinctive character. We were inclined to attribute it to a disposition on the part of the compilers to exercise the reader's judgment, and thus to confer that sort of pleasure which we are told by rhetoricians accompanies the discovery of an author's meaning when not clearly expressed: but we find that they have here and there made an alteration in accordance with the new nomenclature; and we are compelled to conclude that the general result was accidental, not according to any system, and that, like Homer, they sometimes slept. If the naps were somewhat more frequent than those of the Grecian bard, it must be recollected in their favour that they were engaged in a much less animating task. Our readers, we think, are prepared to admit, that the substitution of the old nomenclature for the new, is a second "unnecessary change."

But other changes have been introduced, and we do not yet despair of finding something to approve. We are still engaged in the catalogue of the materia medica; for it is in this that the convention appears to have put forth its strength: and it would be an ill compliment to pass with a brief notice, what, both from the style in which it has been printed, and the marks of labour evident in its construction, may be considered as decidedly the favourite. We find upon a comparison of the New York and United States Pharmacopœias, that though in the former the scientific names of the plants and animals from which the medicines respectively proceed are retained, the authorities for these names, which found a place in the latter, are neglected. The London college, and the framers of the Parisian Codex, deemed it necessary to refer to authority; and the convention at Washington in 1820 thought proper to follow their example. Now, though few can be disposed to appreciate more highly the standing and character of the New York convention than ourselves, we confess, that in a matter of natural history, we should have more confidence in the authority of Linnæus, Willdenow, Gmelin, De Candolle, &c. than in theirs; and should prefer a reference to some

standard author wherein the scientific name of a plant or animal is given. We fear that we shall have to admit that this is a third "unnecessary change."

Another peculiarity is the introduction, under each officinal name in the materia medica, of a very brief account of the properties of the medicine. Such descriptions, in a work of this character, are necessarily very imperfect, and can convey no accurate idea of the substance described. They belong properly to a dispensatory, or a treatise on the materia medica, in which space is allowed for full and accurate details. Besides, there is room for much difference of opinion as to the sensible or medicinal properties of drugs; and in a work which, like a Pharmacopœia, is intended to be a standard for general adoption, there should be as little as possible to conflict with the prevailing sentiment, or even with that of individual practitioners. We know of no national Pharmacopœia in which a description of the medicine constitutes an essential part of the work; and do not think that the innovation in the present instance is a happy one. Is it not beneath the dignity of a great medical convention to inform us that the rose is fragrant and garlic fetid,—that sugar is sweet and vinegar sour,—that jalap purges and ipecacuanha vomits? The dose too is mentioned. How unsatisfactory is necessarily any information of this kind, unless accompanied with an accurate account of the circumstances under which the remedy is administered; for the amount of the dose varies exceedingly with the state of the disease, and the object for which it is prescribed. Nor is there any good reason why these descriptions, if adopted at all, should not be extended to the pharmaceutic preparations, a knowledge of which, both as regards their properties and doses, is quite as important as a similar acquaintance with the simples, or the chemicals not prepared by the apothecary. Why, for example, should we have the properties of Prussian blue described, and not those of the hydrocyanic acid obtained from it? Why the properties of metallic antimony and mercury, and not those of tartar emetic, calomel, and corrosive sublimate? And yet this anomaly is presented in the New York Pharmacopœia. It gives us descriptions, brief indeed, and unsatisfactory, of all the substances contained in the catalogue of the materia medica, but

not of one preparation The fact is, that the system is altogether erroneous, and we do not think the convention thus far more fortunate in their additions than their alterations.

The changes which we have hitherto noticed, have been of a general character, and have not been such as we could approve. Perhaps, when we come to examine the individual articles, we shall find evidences of greater judgment and accuracy; and it gives us pleasure to state, that in a few cases there has been some improvement upon the United States Pharmacopœia of 1820. Thus columbo is referred to the cocculus palmatus—galls to the quercus infectoria, and kino to the pterocarpus erinacea;—the prussiate of iron is defined to be a ferro-cyanate—the supertartrate of potassa a bi-tartrate—the subcarbonate of lead a carbonate—the muriate of soda a chloride of sodium, and the sub-carbonates of potassa and soda, carbonates: the rosa gallica, krameria, taraxacum, and tiglii oleum have been introduced, and a few others of less importance. There may be other improvements in the materia medica which have escaped our notice, but the number cannot be great. Let us now take a glance at those alterations which cannot properly be brought under the title of improvements.

In perusing the catalogue we were struck with the fact that the specific gravity of the mineral acids is not indicated. It is true that the strength of the muriatic and nitric acids is pointed out by the quantity of carbonate of lime which they are capable of decomposing; but the apothecary will find it very troublesome to apply this test of the strength of any acid he may purchase; and besides, its indications would often be inaccurate, owing to the impurity of the carbonate of lime with which he would operate. The sp. gr. may be considered a certain indication of strength, and is always very readily ascertained with at least a sufficient approach to accuracy. Our readers need not be informed that the success of numerous pharmaceutic processes depends on the due strength of the acid employed. The strength of sulphuric acid is not stated in any manner, either by its sp. gr., or by the quantity of any salt which it will decompose; and yet, from its great affinity for water, which it attracts rapidly from the air, this acid is very liable to vary in strength.

Neither is the sp. gr. of alcohol given. In the column of

officinal titles we have simply "alcohol," and in the explanatory column, "alcohol officinale." Now its position in the first column constitutes it officinal, and we are left altogether to guess what is the strength intended. By this single neglect several processes are vitiated, as the proportion of the ingredients has been calculated for alcohol of a particular specific gravity, and the result must vary with any variation in this respect. It cannot be absolute alcohol that is here intended, though such is the import of the terms; for the cost of this would be such as to render it wholly unattainable for the ordinary purposes to which this fluid is applied.

Aloes is called "extract of socotorine aloes," or "extract of hepatic aloes." We are at a loss to discover the meaning of these terms. Aloes is an extract from the plant, and therefore we might with propriety say, extract of the socotrine aloe, &c.;—but from the terms employed in the New York Pharmacopœia, we are left to infer that the drug is an extract of the drug itself. The mistake probably arose from an incorrect translation of the Latin title—"aloes spicatæ extractum," which means extract of the spiked, or as some improperly call it, the socotrine aloe. We much prefer the simple term *aloes*, employed by the United States Pharmacopœia.

Alum is incorrectly stated to be a bisulphate of alumina and potassa. Some chemists consider it a compound of sulphate of alumina and bisulphate of potassa, others of sulphate of alumina and sulphate of potassa;—but none, that we are aware of, a bisulphate of the two bases.

Distilled water is directed in the catalogue of materia medica, and a process is afterwards given for its preparation.

We have the old references of bark to the different species —Cinchona cordifolia, c. lancifolia, and c. oblongifolia—now well known to be incorrect. The yellow bark which yields quinia is universally admitted by the best botanists not to be derived from the c. cordifolia, and recent investigations in France and Germany have proved that our best red bark is not produced by the c. oblongifolia.

"Elaterii pepones," the fruit of elaterium, is given as the officinal title of the medicine derived from the momordica elaterium. Wild or squirting cucumber is given as the En-

glish title, and no other explanation is afforded. We are left then to infer that the fruit of elaterium is the part used in medicine; and in the account of its properties below, we are told that it is a violent drastic cathartic in the dose of half a grain or a grain. Elaterium should at this rate come much cheaper than we find it in the shops. Certainly the convention was napping when this article was presented to their notice. The proper title is given in the United States Pharmacopœia, viz. simply, elaterium. Notwithstanding their objection to "unnecessary changes," they have substituted the fruit for the peculiar substance deposited by its juice, copying the London Pharmacopœia, without considering that the fruit is there directed with the view of preparing the extract from it; the wild cucumber being cultivated in that country. If they introduced the fruit as officinal with a similar view, they forgot their intentions very speedily, for no extract is directed to be prepared from it; nor in fact is the plant cultivated in the United States.

Guiacum is still called a resin, notwithstanding the unanimous determination of chemists that it is a peculiar proximate principle.

The plant which yields by far the largest proportion of *kino* at present employed is not referred to; we allude to the nauclea gambir.

Opium is said to owe its active properties to two *alkaline* principles, morphia and *narcotine*. We were not before aware that narcotine was an alkali.

The convention do not agree with botanists in considering the pipsissewa a species of chimaphilla; they still denominate it pyrola umbellata.

"Sapo albus—white soap," is directed without reference to its composition or character, except as regards colour. The kind of soap usually called white soap, or common white soap, is made with animal oil; the castile or olive oil soap may be white or otherwise. Which do the convention mean?

The bark of sassafras is said to be the officinal portion. In this part of the United States we always use the bark of the root.

The sub-borate of soda is called a borate in the explanatory column. It is admitted by chemists to be a bi-borate.

The spigelia marilandica is called Carolina bark; but we suppose this to be an error of inadvertence.

The inner bark of the slippery elm is said to be inodorous: we have always found it to possess a decided and agreeable odour; but such things go by numbers, and the convention has the majority against us.

We might thus proceed extending the list of mistakes and oversights much further than our readers would have patience to follow us. We will merely observe further, with regard to the catalogue of materia medica, that due care has not been taken to preserve consistency in the plan adopted. Thus the dose of the medicine is sometimes mentioned, sometimes omitted; and the part of the plant, though generally, is not always expressed.

We take leave for the present of the materia medica, and proceed to the preparations, where we hope to meet with ample compensation, in frequent occasions of approval, for the violence done to our feelings by finding ourselves in opposition to the New York convention. But before entering upon this expected gratification, there is one little difficulty which we should much like to have removed. In the description of the officinal weights and measures which intervenes between the materia medica and preparations, we find one sentence, or portion of a sentence, which has been dovetailed into the original, and which has perplexed us not a little. We present it to our readers in the hope that they may be more fortunate than ourselves in fathoming the depth of it. "Ad quantitatem liquidorum indicandam mensuris utimur ex congio vinario deductis," says the United States Pharmacopœia: "nisi in paucis exemplis acidorum mineralium, et hydrargyri, ubi mensuris pondere utamur;" adds the New York convention. Now we are puzzled to know what is meant by "ubi mensuris pondere utamur," and moreover, why the last word should be in the subjunctive mood. But perhaps we may find some assistance in the English translation. "To express the quantity of liquids, we employ the measures which are derived from the wine gallon, *except in a few instances of the mineral acids and mercury, where measures by weight are used.*" Measures by weight are used!—but it is useless to perplex ourselves any longer; we give the matter up. It is mortifying to

be compelled to acknowledge that others can think more deeply than ourselves; but we have the consolation that it was a whole convention, and not a single individual, that has thus surpassed us.

In the plan of the second and most important part of the work, we do not find that any great variations have been made from that of the United States Pharmacopœia. The most striking, is the introduction of the Latin and English, side by side, upon the same page. Though the print is thus rendered much smaller, and requires a pretty close approximation of the eye to be perfectly legible, and though the page is made to have a crowded and sometimes awkward appearance, the arrangement has this great advantage, that if the reader happen to stumble first upon the Latin, he has an admirable auxiliary elose at hand to assist him in solving difficulties arising from a species of construction which he has not met with in the pages of Cicero, or the more analogous work of Celsus.

Another variation is the extension occasionally given to the explanatory notices which precede the several sets of preparations. Opportunity is thus afforded for the introduction of various edifying particulars, which, though contained in every elementary treatise on pharmacy, cannot be too frequently impressed on the attention of those who are very backward in their learning. The convention, very naturally concluding that such information was calculated only for beginners, and must be familiar to those who had dipped very deeply into the classics, did not deem it advisable to clothe these little prefaces in the Latin language. By this conclusion they gained a double advantage: first, they saved all the trouble and time which a translation from the English would have cost; and secondly, they were enabled to crown their double column of fine print with a capitol in larger letters, extending across the page, and thus giving a finished appearance to the work.

We find no other variations in the general plan of this part of the Pharmacopœia worthy of particular notice; and thus far derive much pleasure from the realization of our anticipations of accordance with the views of the convention.

We have observed that the Latinity of the United States Pharmacopœia has seldom been tampered with. Taken, as

the Latin processes originally were, with some slight alterations from the London, Edinburgh, and Dublin Pharmacopœias, and perhaps from the French Codex, and expressed in a style as various as the sources from which they were derived, they present a fascinating diversity of phraseology which few would wish to see reduced to uniformity, if they themselves were compelled to bear the labour and drudgery of the reduction. Still, it must be admitted, that a great national work, like the Pharmacopœia, should have a distinctive character of its own, and not appear, on the face of it, to be made up of patches and shreds of different shapes and colours, huddled together from all quarters, and held in connexion only by external force, not by any inherent affinity among themselves.

The convention, however, did not consider the adoption of one uniform style of Latinity, instead of the different styles comprised in the United States Pharmacopœia, as among the *necessary changes*. We therefore find in the book which has proceeded from the New York press, the same character of diversity, or perhaps we should rather say, the same want of any distinctive character whatever, as regards the Latinity, which exhibits itself in almost every page of our national standard work on pharmacy.

Another circumstance which attracted our notice, was the evident indisposition of the convention to interfere with the more complex processes, which required much time and labour to be properly understood and appreciated, and still more to be duly corrected. Before attempting any material alteration in these processes, it was necessary to examine every step with the most sedulous care; to consult numerous authorities; to make frequently tedious if not difficult calculations; and after having arranged them satisfactorily, so far as mere theoretical investigation was concerned, to submit them to the test of actual experiment. But it must be allowed that this drudgery was beneath the dignity of the convention; and the consequence is, that some of the most objectionable processes of the United States Pharmacopœia have remained unaltered. A few of these we shall notice.

The process for "acetum opii" is preserved in all its original disregard of scientific rule or definite action. It is hardly necessary to state that in no two instances would a me-

dicine of the same strength result from the directions given in this process.

The purification of vinegar by charcoal, as directed in the process for "acetum purificatum," has been proved by repeated trial to be wholly impracticable to any useful extent. Yet not only are the directions retained, but the vinegar thus purified is ordered in several of the subsequent or preceding formulæ, as in those for vinegar of squill and acetate of potassa, in the latter of which it is particularly objectionable. Vinegar may be freed from colour by the action of *animal charcoal;* but even in this way it is not completely purified, and the distilled vinegar is on every account greatly preferable.

As in the United States Pharmacopœia, carbonic acid is placed as a distinct officinal preparation, and is directed to be procured by the action of the sulphuric acid on carbonate of lime; but we are not told how it is to be preserved, and take it for granted that it is to be allowed to mingle with the air of the shop.

The old process of Scheele for Prussic or hydrocyanic acid is retained. This is universally admitted to yield an uncertain product, owing to the variable quantity of ferro-cyanate of iron in the Prussian blue. The French have entirely abandoned it. Either Guy Lussac's or Vauquelin's method is decidedly preferable.

We are somewhat surprised that the process for "hydrosulphuret of ammonia" was allowed to escape the censure of the convention. Every tyro in chemistry knows, or might know by consulting the work of Turner, which is in every body's hands, that to procure sulphuretted hydrogen from sulphuret of antimony, it is customary to employ strong muriatic acid with heat. In the process before us the muriatic acid is very much diluted with water, and the application of heat is not directed: and we will venture to assert, that the hydrosulphuret of ammonia will never be obtained by pursuing the directions given in the United States and New York Pharmacopœias.

The process for phosphate of iron remains without improvement. The very great disproportion of water, and the inaccurate proportion of the saline ingredients are its chief faults.

The aromatic syrup of rhubarb, with its waste of cloves and cinnamon, with its two nutmegs, and the altogether injudicious mode of its preparation, is retained unaltered.

The syrups of sarsaparilla have received no improvement in accordance with our improved knowledge in relation to the pharmaceutic management of this valuable medicine.

In the process for preparing crystallized acetate of zinc, the quantities of the ingredients directed are, one drachm of sulphate of zinc, four scruples of acetate of lead, and twenty fluid ounces of water: so that to obtain less than a teaspoonful of crystals, it would be necessary to evaporate a pint and a quarter of the solution. This is in fact the process of the Edinburgh Pharmacopœia for preparing the "solution of acetate of zinc," and was hastily copied by the framers of the United States Pharmacopœia, without due consideration of the different purpose to which they intended to apply it. The convention of New York has not deemed an amendment of the process among the *necessary changes*.

They have also allowed the formula for sulphate of potassa to pass inspection without any mark of disapprobation, though the first line of it contains an obvious blunder. "Take," say the United States and New York Pharmacopœias, "of the salt which remains after the distillation of the nitric acid, two pounds:" but what that salt is, or how it may be obtained, is not mentioned; as no process is given for the preparation of nitric acid.

Numerous other instances of unaltered formulæ might be mentioned, in which very considerable modifications would be necessary in order to render the Pharmacopœia worthy "of the profession in this country, and of the present advanced state of medical science:" but if we proceed much further with our regrets for what has been left undone, we shall not have space to render justice to the gentlemen of the convention for what they have really accomplished.

And here we rejoice to be able to commend, without putting any force upon our conscience. The omission of several useless formulæ convinces us that some degree of judgment and industry was exercised; and we are determined not to listen to that captiousness of spirit which would whisper in our ear that it is an easier task to destroy than to amend; for

we really do believe that many of the processes omitted were not worthy of amendment. Such, for example, are several preparations of antimony, all the collyria, and a few of the infusions, pills, and tinctures. About the propriety of certain other omissions, there is room for doubt. Some of the profession might be disposed to retain the *acetate of iron*, the *iron plaster*, the *liniment of cantharides*, the *tinctures of aloes*, *columbo*, *quassia*, and *serpentaria*, the *ointment of rose-water*, the *wine of aloes*, and the *compound wine of gentian*, all of which have been erased. One of the rejected preparations we ourselves could have desired to see retained; but as the present condition of the process is imperfect, and some labour might have been required to correct it, we cannot bring ourselves to complain of the course adopted:—we allude to the *emplastrum plumbi subcarbonatis compositum* of the United States Pharmacopœia, commonly known, and much used in this place under the title of Mahy's plaster.

We have spoken of what has been omitted; let us now turn our attention to the alterations. Of some of these, taken chiefly from the London Pharmacopœia, we highly approve, though it must be admitted, that they have occasionally suffered in the passage. Thus, in the *acetum scillæ*, the proportion of squill to the menstruum is adopted, but the quantity of alcohol doubled, in consequence of the substitution, probably unintentional, of undiluted alcohol for the proof spirits of the London Pharmacopœia. In the *emplastrum ammoniaci*, purified ammoniac is directed in accordance with the London College, but we are not informed how the purification may be effected. But it is in their own emendations that the genius of the authors of the New York Pharmacopœia is most conspicuous. We will follow them through a portion of their course.

In the process for *liquor arsenicalis* they order in the recipe certain quantities of arsenious acid, sub-carbonate of potassa, distilled water, and alcohol, direct them all to be boiled together, and the alcohol then to be added. We cannot readily conceive how this fluid is to be extracted from the mixture, or why it should have been originally boiled with the other ingredients.

For soap cerate they direct "hard soap" instead of "white

soap," which is the only kind recognized as officinal in their materia medica catalogue.

Their processes for *simple cerate* and *simple ointment* are precisely the same as regards every thing but the form of expression. Both are directed to be made of four ounces of wax and four fluid ounces of olive oil. They would have avoided this mistake by adhering to the United States Pharmacopœia.

They tell us that "plasters are adhesive, solid, compound substances, *spread upon leather, linen, or silk.*" We were not before aware that this last condition was necessary to the constitution of a plaster.

The *infusion of chamomile* of the United States Pharmacopœia is made with *cold* water, and the maceration is continued eight hours. They retain the cold water, and shorten the maceration to half an hour. Would the virtues of the flowers be extracted in so short a time?

In the *liniment of soap and opium*, they direct opium to be digested with the soap in the spirit of rosemary; but they fix no length of time for the digestion, nor do they order the resulting tincture to be filtered.

In the directions for preparing the distilled oils they employ only the English language, and in return for the compliment, consider themselves authorized to do it no little violence. "The substance from which the oil is to be obtained, is introduced into a retort or common still, and as much water poured on as will cover it; *then distil* into a large refrigeratory." The gentlemen pass too abruptly from the indicative to the imperative. One does not like to be taken thus unawares by a command.

In the preparation of *pills of compound extract of colocynth* we are told to take the extract, without any addition, and beat it into a mass. Is it not in a mass already?

Pills of calomel are ordered to be made with Dover's powder, in the proportion of three parts of the powder to one of calomel. These might be called compound calomel pills, but we know not on what authority they can claim the title by which they are designated. No pills are directed with calomel as their only active ingredient.

The *acetate of lead* is ordered to be made by the action of

"strong acetic acid" upon the sub-carbonate; but the "strong acetic acid" of the New York Pharmacopœia is made by distilling a mixture of sulphate of iron and *acetate of lead.* This plan of acting in a circle, in the preparation of officinal compounds, has at least the merit of novelty to recommend it.

The alcoholic solution of camphor is taken from the tinctures and placed among the spirits. Why this, rather than the alcoholic solutions of muriate of iron, of iodine, of the oil of peppermint, &c.?

In the process for the *milder ointment of nitrate of mercury*, we are told in the Latin language to use triple the quantity of *lard and of oil* employed in the preparation of the stronger ointment; in the English, to use three times the quantity of *lard.* Which are we to obey?

In the *ointment of the impure oxide of zinc*, we are directed to use the "prepared impure oxide," but are furnished with no process for its preparation.

The *wine of colchicum* is made with two ounces of the *fresh bulb* to a pint of wine. We were not aware that the recent bulb was to be had in this country, and if it were imported, it would not arrive in a state fit for use. The proportion, moreover, of colchicum is much too small. We venture to predict that little good or harm will be done by the wine prepared according to this process. We prefer greatly the proportion ordered in the United States Pharmacopœia, viz. one part of the bulb to two of wine. A saturated solution is on every account desirable. Wine prepared in this manner in our city has been found highly efficacious, while that imported from England, or made according to the direction of the London Pharmacopœia, has often proved nearly inert.

We now come to the additions. It is pleasing to observe how sedulously the convention has avoided the more complex processes, which require much trouble or great care in their arrangement. Like careful navigators they keep at a respectful distance from rocks and breakers, and land only when they arrive at some green and sunny island, surrounded with smooth water, where their bark may ride in safety, while they sport and gambol upon the shore. The chemical preparations present a dark and forbidding aspect; and though treasures may be hidden within their bosoms, the approach is sometimes difficult and hazardous to those not well versed in its intricacies.

But the infusions, and mixtures, and pills, and tinctures:—what an ample and delightful field do they afford for those fond of novelties to expatiate in. It is here that the convention luxuriates in all the pleasing consciousness of knowledge and inventive power. It is here that they pour forth of the fulness of their pharmaceutic wealth, and gladden the reader, as well by their own obvious pleasure in giving, as by the feast of novelties which they spread before him. But it is time that we impart a view of these treasures to our readers, and share with them the enjoyment which we have received.

Strong acetic acid is the only chemical preparation for which a process has been introduced, except a few copied from the London Pharmacopœia. We have before stated that this process consists in distilling a mixture of sulphate of iron and acetate of lead. We do not know from what source precisely it was derived. Dr Ure speaks of it; but directs very different proportions from those recommended in the New York Pharmacopœia. He considers it one of the cheapest, though not the best, probably because it affords an impure result.

The original preparations, or those which appear so to us, are *tobacco plaster*, *extracts of sanguinaria*, and *of spiræa tomentosa* (spelled spirea); *infusion of sanguinaria*; *liniment of iodine*; *mixtures of morphia*, *quinia*, and *croton oil*; *pills of nitrate of silver*, of *iodine*, of *lupuline*, of *morphia*, *of piperine*, of *sulphate of quinia*, of *squill and calomel*, of *strychnia*, of *croton oil*, and *compound pills of guaiacum*; *syrup of quinia*; *tinctures of iodine*, *lupuline*, *croton oil*, and *acetated tincture of opium*; and *ointments of tartar emetic*, *and iodine*.

Now with regard to these preparations, though we have a mixture and pills of morphia, which might be made quite as readily by extemporaneous prescription, we have no process for preparing morphia, or its salts, which would be somewhat more difficult to elaborate; nor is any mention made of these medicines in the catalogue of the materia medica. In the mixture of sulphate of morphia, sulphuric acid is added, we know not for what other reason than because acetic acid is requisite to promote the solution of the acetate. The sulphate itself is readily and perfectly soluble.

Pills of piperine, of strychnia, and of sulphate of quinia,

and syrup of quinia, are directed; but no process is given for preparing piperine, strychnia, quinia, or the sulphate of quinia; nor do we find either of these substances included in the list of the materia medica. In the syrup of quinia, two pints of simple syrup and sixty-four grains of sulphate of quinia are ordered, with no other ingredient. We are much deceived if the syrup would retain the salt in perfect suspension. A little sulphuric acid might have been well spared from the mixture of sulphate of morphia and introduced here.

We had nearly overlooked one new process, which, from its beautiful simplicity, we are tempted to present to our readers exactly as we find it in the Pharmacopœia.

"Emplastrum galbani.

℞. Galbani quantum vis."

What a most striking example of the laconic style. A Spartan would have envied the convention the honour of originating this process.

We will briefly enumerate the processes extracted from the London Pharmacopœia, at the same time stating our serious conviction that this is decidedly the best part of the work accomplished by the New York convention. The *acetum colchici* is introduced, and we have no other objection to the process than the direction of *fresh* colchicum bulb, which, though proper in England, is not so in this country. The *liquor aluminis compositus* is defective only in the omission of the proportion of water in which the salts are to be dissolved; the recipe, in fact, as contained in the New York Pharmacopœia, making mention of no menstruum whatever. The *decoction, and extract,* and *syrup of poppy* are well enough, though we cannot see the necessity for them; and no capsules of poppy, from which they are prepared, are directed in the materia medica. The *plaster of ammoniac with mercury,* and the *compound galbanum plaster* are very good preparations; but purified ammoniac and galbanum are directed, and we are not told how to purify them. Of the *plaster of opium,* and *extract of dandelion,* we cordially approve. The last London process for calomel, which has been introduced, is preferable to the former; though we could have wished the convention, in copying the Latinity, to have paid some attention to the difference in gender between the London names of the salts, and theirs; and we can discover no necessity for saying four *pounds* of mercury *by weight,* as

we are not aware that the substantive *pound* is used in pharmacy to express any thing else than weight. *Mercury with chalk* is also a good preparation; but the convention should have remembered, in copying the formula, that their name for chalk is *calcis carbonas*, not *creta*. When to the above list we have added the *honey of borax*, the *mixture of assafœtida*, the *mucilages of starch* and *gum arabic*, the *compound pills of gamboge*, and *of iron*, *sulphurated oil*, and *oxide of zinc*, we have completed the catalogue of preparations taken from the London Pharmacopœia. If to these our readers add *liquorice lozenges*, and *gum lozenges*, extracted from the Edinburgh Pharmacopœia, they will have had presented to them an account of all, or nearly all, the matter that the New York Pharmacopœia contains to distinguish it from that of the United States.

But we despair of being able to convey to them an idea of that peculiarity of manner in which the work is executed, and which gives it a character quite unique. One of the prominent features of this character is a want of uniformity in the modes of expression; a constantly recurring diversity in the names of medicines, and a total disregard of congruity, which impart to the work an air of picturesque wildness, very engaging to those who are enamoured of variety. Thus, *acetum* is their officinal title for vinegar; but when about to be submitted to distillation, or to purification by charcoal, it takes the name of *acidum aceticum impurum;* after distillation it is called *acidum aceticum dilutum;* and after boiling with charcoal, returns back to *acetum purificatum*. In one place, (p. 70), the strong acetic acid is called *acidum aceticum forte*, in another, (p. 127), *acidum aceticum fortius*. *Liquor calcis* has been adopted from the London Pharmacopœia as the name of lime-water; but as if the convention had a lingering attachment for the old name, we find *aqua calcis* recurring in the processes; as in that for *oleum æthereum*, and *hydrargyri oxid. cinereum*. *Calcis carbonas* is their officinal title for carbonate of lime in any form; but we find it among the preparations taking the style sometimes of *calcis carbonas mollis*, sometimes of *creta*, and sometimes retaining the original name. Goulard's extract they call at one time *solution of subacetate of lead*, at another, in the same page, (p. 84), and in the same formula, *liquid subacetate of lead*. In one place they carefully change the name *aurantii cortex*,

of the United States Pharmacopœia, to *aurantiorum cortex*; but in many other places retain the original unaltered. Pennyroyal is called *hedeoma* in the materia medica; *cunila*, among the preparations (see p. 118). Gaultheria is named *partridge berry* and *mountain tea*, in the materia medica; but when its oil is to be extracted, it is transformed into *winter green*. *Uvæ passæ* is the officinal title adopted for raisins; but in the compound decoction of barley, *uvæ*, grapes, are unintentionally directed. *Emplastrum tabaci* is translated *snuff plaster*, though we have no where else in the work heard of snuff as an officinal name. But why do we go on multiplying these instances, as if we might soon come to the end of the list? We assure the reader that throughout the whole work this incongruity prevails; and sometimes many processes occur in succession, in which the title which they gave as officinal in the materia medica is not once employed. This want of uniformity results from very unnecessary changes made in the officinal titles, without due care to follow up these supposed corrections. They seemed to think that if the leading sheep of the flock could be made to jump over the fence, all the others would follow as a necessary consequence, without any further trouble on their part.

We find the same variety in the Latinity as in the names of the remedies; and errors have very frequently crept in, which we should not like to attribute to any other cause than oversight. Even the English is not free from occasional errors in spelling and grammar:—and the press seems to have wantoned in mistakes. But we have not room to particularize these comparatively venial faults; and our readers are no doubt tired of the subject. If they have not found those excellencies in the work which they might have anticipated, we wish to assure them that it is owing to no fault of ours. It was natural for us, as well as them, to expect something useful, if not extraordinary, from a convention which claimed the virtual representation of the twenty-four United States;—and these expectations were at first confirmed by the assertion in the preface, that every endeavour had been made to render the Pharmacopœia "worthy of the profession in this country, and of the present advanced state of medical science." We confess honestly, that we have been disappointed. So far, however, as regards the operation of the work within the United States, we are under no apprehension of injurious re-

sults. Being in fact altogether local in its origin, it is not likely to be received by the profession generally as a pharmaceutic standard work; and we are much deceived, if even at the very doors of the convention it is not the subject of a smile;—for our opinion of the general intelligence of the medical profession in New York is too exalted to allow us to suppose, that with all their sectional feeling in its favour, they can fail to appreciate it as it deserves.

It is the influence of the work abroad upon the medical character of this country that we fear. Should it reach Europe, and attract the attention of the pharmaceutists of France or England, purporting, as it does, to come from a convention, representing the whole body of physicians in the United States, and professing to be worthy of that body, we greatly apprehend that its numerous imperfections, errors, and inconsistencies, instead of being traced to their proper source, may be placed to the account of the general ignorance of the profession on pharmaceutic subjects. We protest, however, in the name of our medical brethren throughout the Union, against such an interpretation of the claims of this hasty performance. Should these remarks meet the eye of persons in Europe, who may have seen and perused the Pharmacopœia published at New York, we wish to assure them that it will be wholly disclaimed as the representative of the condition of pharmacy among us. Should any standard be required, at this moment in existence, we should much rather stake the credit of the country upon the original Pharmacopœia of the United States, which, though very imperfect, from the haste in which it was prepared, is decidedly superior, as a whole, to the work which was intended to supersede it.

We understand that the Pharmacopœia of the United States, revised by the National Convention at Washington in January 1830, is now in the press, in this city. We hope that for the good as well as the credit of the country, it may not merit the same condemnation with the work which has been engaging our attention. We wait, however, for its appearance;—and when it does come into our hands, shall endeavour to give our readers an impartial account of its contents, whether for good or for evil.

QUARTERLY SUMMARY

OF

MEDICAL AND SURGICAL INTELLIGENCE.

I. ANATOMY.

1. *Human Horns.*—On the 2d of March M. Logés read to the French Academy of Medicine, an account of some human horns, and at the sitting of July 13th, M. Villeneuve, in the name of the committee appointed for that purpose, read a report upon his paper. The committee has added to M. Logés's case seventy-one others, collected out of various authors, to wit, thirty-one in men, thirty-seven in women, and three in young children. The horns were situated, in nine instances upon the head, in fourteen upon the forehead, and in twelve on the thigh; in the other instances they were found three times on the temple, five on the nose, two on the cheek, one on the jaw, four on the breast, four on the back, three on the penis and glans, one on the ischium, two on the knee and ham, one on the leg, and two on the feet and heel. The committee also cite from Bonnet, the case of a girl, who at three years of age had horns growing from every part of her body, so that at her thirteenth year, she was quite covered with them. Some of these horns were twisted like ram's-horns; when they fell off, others grew in their places; there was one horn three inches in length, at the end of each finger. The committee also agree in opinion with M. Breschet, that the skin and mucous membranes are the only tissues of the body capable of developing horns, and that the cartilaginous transformations, frequently met with upon the liver, spleen and lungs, should not be regarded as such.—*Archiv. Gen. July.*

2. *Bicephalous Child.*—We do not know that any beneficial results are likely to accrue to the operative part of the science of medicine, by the elaborate researches now going on in France, in relation to monstrosity; yet we can not avoid a human curiosity in relation to the subject—in this, our feeling is common to the whole human race, we believe—witness the common anxiety to see the nomadic exhibitions, annually and diurnally published by fiddle and hand-bill, of the five legged sheep, and double-headed snake, and all other such freaks, from a cat with two tails in a bottle of alcohol, up to the Siamese boys, and the still more famous Rita-Christina.

M. Geoffroy-Saint-Hilaire, whose lucubrations we have had frequent occasion to lay before our readers, continues to display an indefatigable zeal in the illustration of these singular specimens of organization; and in the July number of the *Archives*, has again favoured us with an account of a double-headed girl, born May 13, 1829, at Olus, in the Arrondissement of Saint Giron. This child was born dead, and was buried in a few hours afterwards; but the Marquis of Castenac, the sub-prefect of the Arrondissement, ordered it to be disinterred, after it had been three days under ground, and submitted to the examination of

three physicians. It was converted into a very perfect mummy by a druggist named Saintenat, and carried to Paris. In this subject, the right side was more developed than the left, which was just contrary to what had been noticed in Rita-Christina—besides, Rita-Christina had two hearts, united in a single pericardium, while this Pyrenean double-head had a separate pericardium for each heart.

M. Saintenat's mummy has a vermicular appendage about two inches in length at the posterior part of the sacrum, which looks like a tail. This singular appendage has indeed been noticed in all the monsters that were double above and single below; and accounts for the absence of lower extremities in one of the individuals. It proves the existence of what has, by some anatomists, been denominated an *arrest of development*. Rita-Christina had not this appendage, but in its place she had a scar, probably occasioned by the amputation of her tail.

II. PHYSIOLOGY.

3. *Mr Dobson on the Spleen.*—Mr Dobson has published a pamphlet upon the structure and function of the spleen, in which he gives an account of some experiments performed upon dogs, with certain deductions from his investigations, some of which we find in Dr Johnson's Med. Chir. Review, &c. for Oct. 1830.

Mr D. inquired into the changes produced in the spleens of dogs by the process of digestion, and found that until three hours after a full meal no visible alteration takes place in the organ. At the end of four hours it is much enlarged, and in five hours attains its maximum, after which it gradually diminishes in bulk for twelve hours.

Such is the statement of the results which Dr Johnson furnishes us with, and as he does not impart any of the circumstances of the experiments from which the deductions are drawn, we ought perhaps to have our mouths stopped; but we are, nevertheless, somewhat surprised to see such mathematical accuracy in the occurrences indicated, to wit, those stated to be observed at three hours, four hours, five hours, and twelve hours. The spleen is always various in the same species, and even in the same animal; we therefore like not to see such precision upon a physiological point, which, in itself and by its own nature, cannot be precise. Whether the results were obtained upon two dogs, or upon two hundred, it is all the same; they could not be obtained, upon dogs already opened before the ingestion of the food; and if they were so obtained the traumatic irritation were sufficient, we imagine, to vitiate the physiological results.

Mr D. also removed the spleens of dogs to see what effect would be thereby produced. The animal apparently suffered but little from the operation. On the next day it ate voraciously; this meal was followed in four hours by evident marks of a plethoric state, which subsided in about five hours from the commencement of the phenomena. The dog lived a month.

In another dog, after removing the spleen, there were no symptoms of plethora because he gave it food in small quantities, and repeated it frequently. No unpleasant symptom followed; the animal in three weeks was quite well. He then began to give full meals twice a day, which was followed by the same phenomena of plethora, and the animal, like the former, died in a month after this change in its diet was introduced.

In both animals the intestinal evacuations were of a lighter colour than natural.

Mr D. thinks the turgidity of the spleen commences at the end of the chymifactive process, when the duodenum is receiving chyme from the stomach: hence the experimenter infers that "the spleen acts as a reservoir for containing the additional quantity of food which the vascular system has received by means of the nutritive process." He thinks that in five hours after a meal there is more blood in the system than at any other time, and as the vessels could not, with impunity, contain this increased proportion, the spleen acts as a reservoir for the surplus.

As Mr D.'s dog when fed upon abstemious fare continued to be comfortable, and, on the contrary, suffered under the symptoms of plethora when highly fed, the inference is that the removal of the spleen, by taking away the reservoir, permitted the new product of hematosis to accumulate in the vessels in addition to the general and standard amount of the circulating fluids.

He also infers, from his experiments, that when the system suffers an extensive loss of blood, the spleen furnishes a supply from its reservoir.

Under this aspect the spleen might be regarded in the light of an air-vessel in a forcing pump, designed for the purpose of keeping up a steady pressure on the escaping fluids.

We have selected the above notices for publication here, not only on account of any intrinsic interest they may possess, but also because they forcibly recal to mind the lectures of the late venerable professor Rush, whom we heard, seventeen years ago, detail almost precisely the same doctrines of the functions of the spleen; doctrines on which he long insisted with all that elegant and forcible eloquence which gave him the title, long to be his own, of the *facile princeps* of American physicians.

4. *Nature of the globules of the blood.*—In a memoir on the minute structure of animal tissues, M. Raspail teaches that the blood-globules are simply albuminous, and rests his opinion on the solubility of these globules in water, acetic acid, &c. M. Donné has arrived at a different conclusion in the following manner: when water is poured upon a small quantity of human blood, while under examination in the microscope, the globules soon disappear, and can not be found, except when carefully examined under a great magnifying power, and particularly by the light of a lamp—when we find that the water contains a number of small, round bodies, very transparent, and difficult to be distinguished, but which are absolutely insoluble, no matter how much diluted the blood may be.

This thing becomes much more evident when operating on the blood of the frog, whose globules are much larger; even by the light of the sun, it is manifest that these small round bodies are nothing more than the globules themselves, deprived of some of their elements. If it be desired to repeat this experiment on a large scale, one ounce of blood should be diluted in eighteen ounces of water, or more if necessary, to disable us from seeing the globules by the light of day; the mixture should then be filtered, and the plastic matter from the philter collected. When a small quantity of this substance, which possesses all the characters of fibrin, is put on a piece of glass with some water, and examined in the microscope by the light of a lamp, it presents all the globules in their primitive form.

By varying these experiments, it will be seen that the globules of blood are not completely soluble in the menstrua which dissolve albumen but do not dissolve fibrin. Thus, ammonia and acetic acid will cause them to disappear so completely that no trace of them can be found.

From these facts M. Donné concludes they are not a simple precipitate of albumen, as supposed by M. Raspail, but are formed of a tissue of fibrin, in the meshes of which the albumen and colouring matter are deposited. Indeed, in M. Raspail's opinion, albumen and fibrin are not two different principles, one being only a modification of the other: this is of little consequence to the question itself; all that M. Donné wishes to prove is, that the blood-globules are insoluble in water, and that if they are albuminous, it is albumen in the state commonly called fibrin by the chemists.

It is seen above that M. Donné's opinion on the globules differs from that of Hewson and MM. Prevost and Dumas, who considered them to be composed of a central vesicle enveloped in a stratum of colouring matter.

M. D. thinks that when they come out of a vein they are of a lenticular shape; but that their nucleus consists of a delicate tissue of fibrin containing in its meshes some albumen and red matter, pretty much in the same way as the hyaloid membrane contains the vitreous humour.

When placed in contact with water, or after remaining for some time in serum, they lose their flattened shape and become round, &c. *Archiv. Gen. August.*

5. *The Eye.*—Professor Rossi having conceived some doubts as to the continuity of the retina with the optic nerve, and on the faculty attributed to the former of transmitting the images of objects to the sensorium, he extracted an eye from its orbit, made a puncture in the sclerotica, a few lines distant from the cornea, and penetrated to the choroides; he then blew air into this opening, and suspended the eye by the optic nerve, until putrefaction had taken place. He afterwards opened the fibrous envelope as far as the optic nerve, and found the retina and choroides separated from the nerve and removed from it to the distance of a few lines, the vitreous body being in contact with it; he could now easily separate the putrefied sclerotica from the dried nerve. He thinks that the pigment of the choroides, which is detached by *maceration* and by washing, is a secreted substance, whose colour, according to the analysis of professor Lavini is owing to the presence of protoxide of iron.

He has not found betwixt the affections of the globe of the eye and those of the meninges and brain, that connexion that ought to exist if there were really a continuity of tissue; in cases of amaurosis of the optic nerve with loss of sight, the texture of the globe of the eye exhibits no alteration whatever. In cases of amaurosis of one side, the optic nerve, when compared with the opposite one, appears to be atrophied, while the retina is alike in both eyes, and even responds to the electro-galvanic influence. In cases of polypus of the frontal and maxillary sinuses, the author has found polypi of the size of a millet-seed on the choroid and retina which had not affected the sight of the person.

From the above facts, and others we shall not detail here, the professor concludes: 1. That the constituent parts of the globe of the eye are not prolongations of those of the encephalon. 2. That the choroid pigment is a product of secretion. 3. That the retina is not a continuation of the optic nerve, but probably serves in some way to modify the images which it transmits to it.—*Archiv. Gen. August.*

6. *On the Animal Temperature in different Latitudes.*—We extract the following from the *Edinburgh Medical and Surgical Journal* for October. A few years ago Dr John Davy made some interesting experiments on the differences which take place in the temperature of the human body, in passing to warmer or colder latitudes, (*Edinburgh New Philosophical Journal,*) and the result was, that in warm climates it rises, and in cold climates falls a little. These experiments have been more lately repeated by M. Renaud, of Paris, during a voyage to the east. The voyage was from Toulon, by the Cape, to the Isle of Bourbon, the Maldivians, the Coromandel coast, Bengal and the coast of Pegu, Ceylon, the straits of Sunda, Java, and then home by the Cape to Havre; and it lasted from May 1827 to December 1828. The thermometers used were carefully compared by M. Arago with the standard at the observatory of Paris, both before and after the voyage, so that the accuracy of the observations is unquestionable. There are seven sets of experiments, four of which were made in the torrid and three in the temperate zones, and each set was made on the same twelve men, all of them living in good health, most of them athletic, and all fed and exercised almost entirely in the same manner. On the 1st of July, in 10° 4′ north latitude, the air being 79° Fahrenheit, the average temperature of twelve Europeans was 99⅜°. On the 10th of August following, in 36° 10′ south latitude, the air being 64¼°, the average temperature of the body was 98¾°.

On the 11th of September, under the line, with an atmospheric heat 86°, the temperature of the body was on an average very nearly 100°. Next year on the 13th of May, in latitude 7° 1′ south, the air being 86°, the body was 99½°. On the 14th of October following, in 32° 23′ south latitude, the air being 62½°, the body was 99°. On the 30th October, under the line, with an atmospheric temperature of 79°, that of the body 99½°. On the 4th December, in 46° north latitude, the air being 53½°, the body was 99°. Hence it will be perceived, that the range of the animal heat between climates where 53½° and 86° are the extreme temperatures of the atmosphere, is 1½° Fahrenheit, and that it rises as the atmospheric heat rises, and vice versa, with some slight irregularities, probably to be ascribed to the coldness or heat of the climate which the subjects of experiment had just left.

III. PATHOLOGY.

7. *Ovarian Dropsy of great magnitude.*—Dr Hodge reports to us a case of a coloured woman, Juliana Matthews, who for about six years had suffered from a dropsy of the ovaries. Her natural constitution seemed very excellent; being a tall and strong female: her menstruation had always been painful. She had had children, which were generally small; has had no child since 1811 or 1812,—has been a widow since 1820: and has since menstruated regularly, but as usual with pain. The only abdominal complaint which preceded the ovarian disease, was obstinate costiveness; she often had not a stool for a week; frequently not for two weeks; and once was eighteen days without a passage per anum. She had once a severe attack of cholera morbus. In the spring of 1825, she first discovered a "lump" in her abdomen, which enlarged steadily and rapidly. She resorted to various empirical remedies, and also to professional assistance, with no permanent advantage.

Dr H. first visited her in August 1826. She was then much larger than a female at the 9th month of utero-gestation; hard tumours could be felt in the right and left iliac regions, and also in the anterior portions of the lumbar region: fluctuation was very distinctly perceptible in the hypogastric and umbilical regions.

The disease increasing, and the uncomfortable feelings from weight and distention augmenting, she was tapped below the umbilicus, November 27, 1826, and two and a half gallons of a dark reddish-coloured fluid were drawn off, which, when at rest, deposited brown coloured flakes, resembling coagula of blood. The abdomen was but very partially emptied, and it was now evident, that the tumours extended far up into the hypochondriac regions, pressing on the colon, liver and stomach, and that other cysts existed, in which fluctuation was evident. The patient's general health was good, with the exception of constipation, which was ameliorated by medicine.

In June 1827 she was again tapped, and about two gallons of a serous coloured fluid were removed: and again, January 30, 1828. Her bowels still being costive, the oil of croton was given, with but trifling effect; afterwards, the elaterium, in combination with aloes and rhubarb;—this always operated, and seemed to have produced some durable impression, as afterwards, laxative medicines would operate, and often the stools were spontaneous.

On the 18th of June 1828, paracentesis abdominis was the fourth time performed, below the umbilicus; the discharge was of a light serous character, and was soon arrested by the falling of the tumours against the extremity of the cannula; considerable quantities flowed after the cannula was removed. The patient was quite unwell after this operation; suffered from pain in the abdomen, dysenteric stools, pain and great languor. She recovered and enjoyed her usual health. About this period her menses for the first time ceased, and did not afterwards return.

In May 1829, (27th inst.) the operation was again performed; the fluid was of a light colour, and amounted to about three gallons. The tumours had enlarged to a monstrous size, pressing on each side firmly against the ribs, and occupying all the lateral and anterior portions of the abdomen; it was with difficulty the patient could ascend or descend from her chamber, or even walk about the room. The skin was very tense, and small grooves could be felt, made in the cutis by the superficial veins; vesication would occasionally form on the lower part of the abdomen, and much fluid be evacuated—no bad consequences would result. The patient's general health was usually very good—no symptoms of irritation were present; she had occasionally attacks of pain in her limbs and abdomen, and great feelings of languor. This summer, also, she once had an alarming syncope—her head suddenly becoming very dizzy, and her senses and mind failing—with some slight convulsive affection. In the following autumn, she was in the same condition; more comfortable, however, from the coolness of the weather, although her swellings manifestly augmented. Early in the winter, she became the subject of a severe cold, affecting the chest, bron-

chitis—which rendered her very uncomfortable. The cough afterwards continued with varying intensity, during the winter, spring, summer and autumn,—no effectual means were adopted for relieving it. Dr H. was not requested to visit her again until the beginning of the present month, when he found her much altered for the worse. Her cough was very severe, coming on in paroxysms, generally dry and hollow, but some mucous expectoration usually occurring after violent efforts; dyspnœa considerable, preventing her descending the staircase, of course leaving her room; frequently she could not lie down, and could move at any time only with difficulty—her pulse was full and tense, tongue clean, occasionally some fever at night. Her abdomen was now much increased in size, measuring from the pubis to the lower extremity of the sternum thirty-four inches, and round the body at the umbilicus fifty-eight inches. On the 3d instant, a puncture was made below the umbilicus from which very little fluid was discharged; a second puncture was then made, about an inch above the navel, where fluctuation was evident, and about two gallons of bloody fluid were evacuated. She was partially relieved by the operation—her cough was less dry, expectoration more free. In two or three days, she however suffered severely, from great soreness and pain over the whole abdomen; her cough was more troublesome, and she had fever at night. Bleeding, to fourteen ounces, relieved her very much, and for a time she was comparatively comfortable—her cough afterwards remaining free, and expectoration copious. Soon, however, she complained of great increase of languor and weakness, of wandering pains in her back, limbs and abdomen, restlessness at night, sometimes of great nausea, and even of vomiting, and occasionally of great coldness, particularly over the cervical and dorsal portions of the spine.

On Tuesday, December 21st, the breathing became much oppressed, without any apparently new cause, cough and expectoration increasing, and her abdomen again as large and tense as ever. Breathing continued to become more oppressed, and her strength failed rapidly. She died on the night of the 23d instant.

On Friday afternoon, December 24th, an examination of the body was made; present Drs Horner and Hodge, and Mess. Mifflin Wistar and Peace. Dr Bell also came in before the body was again closed. The corpse was much emaciated; the abdomen remarkably protuberant, now measuring fifty-one inches in circumference, and thirty-one inches from pubis to sternum. On dividing the abdominal parietes, none of the viscera could be observed; for an encysted tumour, or rather a congeries of such tumours, occupied the whole space from the pubis to the sternum, and from one lumbar region to the other; the ensiform cartilage being turned upwards on itself, so as to resemble in curvature a ram's horn, and the liver, stomach and transverse portion of the colon being pushed high up under the ribs, and the small intestines and the ascending and descending colon occupying the posterior portions on each side of the vertebræ. All the viscera were much diminished in size, and the liver of a lighter colour than natural. The tumour evidently originated from both ovaries, and indeed seemed to be formed out of these bodies, the cells of which being enormously enlarged and the parietes greatly thickened. The cysts were of various dimensions, some not containing more than a drachm of fluid, while others contained pints or even gallons. The largest cyst extended from a little below the umbilicus to the ensiform cartilage, and probably contained three gallons of fluid. The appearance of the fluid was exceedingly various in the different cysts; in some, it resembled a light coloured serum, in the large cyst it was of a very dark red or brown colour, and in others, almost every intermediate shade was observed. In the large cyst, was also discovered a great quantity of coagula of blood, of a light pink colour and of a very loose texture, free however from putrefaction. The tumour thus formed had contracted strong adhesions to the whole anterior walls of the abdomen, and also some weaker and more scattered connections laterally and posteriorly to the mesentery. These were all easily divided by the scalpel, and part of the fluid being evacuated, the whole mass, with the uterus, was removed by incisions through the cervix uteri and vagina. On the posterior and inferior part of the tumour, adhering by cellular tissue but not closely united to it, the uterus was noticed in a very disorganized state; its proper tissue being much enlarged

and diseased, and giving origin to two large tumours: one about the size of a hen's egg, but flattened, was osseous and could not be divided by the scalpel—the other, smaller, was cartilaginous. The uterine cavity was enlarged but much deranged, being apparently stretched in the direction of the Fallopian tubes, so as to form an irregular tri-cornered space. The lining membrane was of a light colour. The tumour when deprived of most of its liquid contents weighed twenty-five pounds, and the fluid emptied from the cysts including the coagula measured twenty-six pints.

This case is interesting as bearing on the question of extirpation in the early stages, as recommended and practised by Drs M'Dowel, Alban G. Smith and others (see Vol. I, &c. of this Journal). Such an operation, even if undertaken before adhesions had occurred, would probably have been here useless, if not fatal, from the diseased condition of the uterus and from both ovaries being involved in a common disease. A dissection was made about two years since at the Almshouse on an elderly subject greatly emaciated, in whom an encysted dropsy had existed for many years. The tumour was very large, extending nearly to the sternum, but rather flattened, so that the protuberance of the abdomen was not great. Here, no adhesions had been contracted; the uterus, right ovary and ligaments were natural; and the only attachment of the tumour, formed out of the left ovary, was an enlarged fallopian tube and a thickened broad ligament. The whole mass was with facility turned out of the abdomen, and an incision of an inch and a half through its pedicle separated it completely. Such a case, if early operated on, would afford every prospect of success; but, how can these cases be discriminated during life?

8. *Softening of the Uterus.*—The following account of this diseased condition of the uterus we extract from a very excellent review of the publications of MM. Tonnellé, Duplay, Dance and Luroth, on puerperal fever, uterine phlebitis and softening of the uterus, contained in the October Number 1830, of the Edinburgh Med. and Surg. Jour.

"In its incipient stage, softening of the uterus, according to the observations of Luroth, consists in a serous infiltration of the substance of the organ, in consequence of which, the parietes become extremely flaccid, and are very easily cut. The colour, however, is not materially altered, and although the inside of the uterus is usually lined by an exceedingly fetid pulp, this is no proof that the softening of the parietes is allied to gangrene or putrefaction, for the same fluid is sometimes found when the substance of the uterus is sound; and when the two appearances occur together, a little care will enable the dissecter to ascertain that the odour does not necessarily adhere to the softened uterus. This form of the disease appears not to have been observed by M. Tonnellé, and it is certainly rare, when compared with what M. Luroth considers its more advanced, but M. Tonnellé its first stage; where the texture of the uterus is softened almost to a pulpy consistence, like an apple which has begun to decay, and consequently tears in the fingers when it is raised, or breaks down into pulp when squeezed between them. Softening of the uterus of the latter kind has been extremely common in all the epidemics of puerperal fever, which have been observed in Vienna and in Paris. It is sometimes partial, being confined either to patches of the uterus, or more frequently to a thin layer of its entire inner surface; but very frequently it is quite general, and affects the whole extent and thickness of the parietes. The colour of the texture is sometimes unaltered, sometimes rather paler than natural, occasionally rather darker. The smell of the softened parts is not putrid; but it requires some care to satisfy one's self of this, as the disease is always attended with a horribly fetid effusion on the inner surface. The parietes are sometimes thickened and spongy, but at other times they are attenuated, or, as it were, *atrophied*. In its extreme degree softening becomes the *putrescence* of the uterus of Boer and other German pathologists. Even then the tissue of the parietes has not a putrid odour; for the overpowering putrid smell exhaled by the organs of generation, according to Luroth, is still owing entirely to the dark pulp which lines the inner surface. This circumstance, which seems to have been overlooked, not only by Boer and his countrymen, but likewise by M.

Tonnellé, led to the name by which this, the highest degree of softening, has been generally known, and likewise to the notion entertained by some that it is of the nature of gangrene. Even in its worst form, softening of the uterus was sometimes produced, like suppuration of the veins, with a rapidity for which it is extremely difficult to account, unless we adopt the opinion of Boer, that it commences before delivery. In one of M. Tonnellé's cases, the patient, two days after an easy delivery, was attacked with the first symptoms of mischief, and died in twenty-four hours; yet the whole thickness of the uterus, over two-thirds of its extent, was reduced to a brown pulp, destitute of every trace of organization, and capable of being crushed between the fingers with the greatest facility. Among the two hundred and twenty-two cases of puerperal fever examined by M. Tonnellé, there were forty-nine in which the uterus was found softened, and among these the softening was superficial in twenty-nine, but deep in no fewer than twenty. When the softening was superficial, it was generally also in scattered patches only. When deep it commonly affected the whole extent of the organ. Superficial softening was always accompanied with some other affection, such as peritonitis, simple metritis, or inflammation of the uterine veins. The same was also generally the case in the instances of deep softening; but frequently the softening of the uterus was evidently the chief disorder, and in some instances it existed alone. It was obviously connected with very marked typhoid symptoms in every instance where the disorder was extensive and advanced, even when no other pathological change concurred with it.

The opinions of the authors who have noticed softening of the uterus, are much divided as to its nature. Some, as M. Duplay, consider it always the consequence of inflammation, and a few even view it as nothing else than gangrene. Luroth and Tonnellé, however, contest the accuracy of the last doctrine, and with some success. Decided gangrene of the uterus is always, as Luroth observes, preceded by acute inflammation, which is seldom remarked in the worst cases of uterine softening; in gangrene the parietes are unnaturally thickened, which in softening is far from essential; in gangrene there is an inflammatory circle or other boundary, which limits exactly the mortified part, while in softening there is no such circle, no exact boundary, but a gradual passage into the surrounding firm texture; and in gangrene there is a peculiar odour of the diseased tissue, but in softening no such odour is remarked, if care be taken to remove the inner pulpy layer. The question of the origin of softening of the uterus in inflammation is a much more doubtful one. Most of the authors who have noticed it consider that in some cases inflammation is its cause, because in its slighter degrees it is always attended with other unequivocal indications of simple metritis, peritonitis, or phlebitis. They do not, however, conceal the difficulty thrown in the way of this doctrine by the circumstance, that in its extreme degree, softening is not preceded by any obvious signs of inflammatory action; and generally, that the antecedent inflammatory reaction bears no relation whatever to the extent and degree of the softening. We may remark in general terms that from the analogy of other effects of inflammation, such as the gangrene, suppuration and infiltration which follow spreading cellular inflammation, the difficulty here stated does not appear a very insurmountable one. M. Tonnellé is disposed to consider the inflammatory appearances as secondary, and that softening of the uterus is, in the first instance, unconnected with inflammation, and probably dependent on a morbid state of the blood. Softening of the uterus is observed most generally after delivery; but Boer and his countrymen have rendered it not improbable, that general softening of the uterine parietes occurs in an inferior degree during pregnancy, and may be the cause of the subsequent development of putrescence of the uterus after delivery, as well as of occasional rupture of the uterus during labour, and likewise of the death of the fœtus during the latter months of utero-gestation."

9. *Disorganization of the Epidermis occurring in new born Infants.*—A very important disease occurring in new born infants, according to Jœrg, in his work *Uber die Kinderkrankheiten*, page 310, is one characterized by a peculiar morbid condition of the epidermis, causing the latter to be detached upon the slightest touch, from the palms of the hands, the fingers, soles of the feet, toes

and frequently also from the entire surface of the body. Dr Jœrg has, however, only seen one case in which this condition of the epidermis extended over the whole surface: it was in an infant born at the full period and very vigorous. He has met with it most generally on the hands and feet. In every case he was convinced that the mother had been affected during pregnancy with syphilis. None of the infants affected with this disease survived over four or five days, and though born at the full period, they were almost always meagre and feeble. The parts despoiled of the epidermis became inflamed, which, in addition to the extreme feebleness of the infants, is the chief cause of their speedy death. Dr J. expresses entire ignorance as to the exact nature of this disease. The morbid condition of the skin upon the hands and feet is frequently accompanied with a pustular eruption on different parts of the body, the form and appearance of the pustules differing essentially from those of small pox. They resemble, however, the vaccine vesicle at about the twelfth or thirteenth day. The author has been unable to form any opinion as to the nature and progress of this eruption, in consequence of the short time during which the infants affected with this singular disease survived.

10. *Neuralgia Rheumatica of the Diaphragm.*—The following case of what is termed acute neuralgia rheumatica of the diaphragm, is related by Dr Coudret, *interne â l'Hôtel Dieu*, who was himself the subject of the disease, in the *Journal Complémentaire*. The abstract now presented is derived from Johnson's Review.

The patient was aged about twenty-nine years, of a nervous temperament, but enjoying good health. He had been subject, for some time, after an exposure to cold in the amphitheatre, to slight intercostal pain in the left side, occasionally exchanged for pains of a colicky nature in the bowels—for coryza—and for cynanche tonsillaris. On January 28, 1830, when the temperature was twelve degrees of Reaumur below zero, he was so imprudent as to have his hair cut short; immediately after which, he became affected with slight bronchitis, and some inflammation of the tunica conjunctiva. On the 8th of February, these affections being still in existence, he was exposed, while warm, to a current of cold air, and then repaired to the hospital, where he did not, at first, experience any particular affection. At 5 o'clock in the afternoon, he dined, but without appetite. At 8 o'clock, he experienced a febrile horripilation, general uneasiness, heaviness of head, pain in his joints, disinclination to motion. Soon after this a shiver was felt, succeeded by febrile re-action, violent pain in the limbs, loins and head, &c. He during the night was restless; the pains, at first general, became ultimately concentrated in the left lumbar region, and the lower part of the chest on the same side. Next day the skin was still dry and hot; the restlessness incessant; headach intense; feeling of great sanguineous congestion about the face; tongue pasty, but not red; thirst considerable; some nausea; urine pale; bowels costive; cough, with catarrhal expectoration; pain in the loins increased by the act of coughing. On percussion, the chest was throughout sonorous. At each effort to inspire, the patient found himself checked by a sudden and violent pain, apparently in the situation where the diaphragm is attached to the false ribs of the left side, and to the spine. He believed that he felt this pain in the tendinous centre of the diaphragm, whence it appeared to radiate along the course of the left diaphragmatic nerve to the neighbourhood of the clavicle of that side. The act of turning, the least effort to breathe, to expel the urine, to eructate, or blow his nose, increased this pain to exquisite torture. His common respiration was, also, short and embarrassed. Lastly, he felt a sensation in his left arm similar to what is described by those who labour under angina pectoris. Nothing was experienced about the right side of the chest. Careful pressure was made on all parts of the abdomen, but no uneasiness was produced in consequence. These phenomena convinced the patient that the disease was not pleuritis; but that the seat of the malady was the diaphragm. The fever was now very acute, the pulse full, hard and quick—in short, every thing indicated the necessity of venesection. He was immediately bled to a large amount, without inducing faintness. The blood was rich, but very little inflamed. Feeling some nausea, he took several glasses

of warm water, and cleared his stomach, but without discharging any remains of food, or bile. He now felt better, and had a mild perspiration. But the pain, as described, continued, and the febrile symptoms were soon renewed, with discontinuance of the perspiration. Thirty-five leeches were now applied to the anus, followed by a hot poultice to the same, and to the feet. These means completely removed the headach, and much of the general uneasiness; the perspiration was re-produced, and some repose would have been experienced, but for the pains in the region of the diaphragm, which continued to harass the patient. He now balanced between the application of forty or fifty leeches to the chest, or sinapisms to the same. Deciding in favour of the latter, he so managed them as to keep up a constant counter-irritation over the left side and back of the thorax, without producing vesication. Two days continuance of this discipline gave complete relief to his sufferings. On the 12th of February he was free from all complaint, save debility.

11. *Cancer of the Pancreas.*—The following case, related by M. Dupré, *élève à l'Hotel Dieu*, with the report of M. Forge, occurs in the *Revue Médicale*, *Aout* 1830. The subject of the disease was a female, fifty years of age, who, for a long time, had subsisted upon an unwholesome diet. She had suffered for a year vague pains in the abdomen, disordered digestion, and obstinate constipation. Her health became gradually undermined; her skin acquired a yellowish tint; pains were experienced in the region of the left kidney; these extended themselves towards the neighbouring organs, and the left groin. During her residence in the hospital, the patient laboured under the same symptoms as those described, but in a greater degree. To them were, also, added, an almost entire loss of appetite, bitter taste in the mouth, and a febrile exacerbation in the evening. All these symptoms appeared for a short time to abate under a soothing treatment. The cachectic condition of the patient, however, augmented, and an erysipelas occurring on the face, soon destroyed her life.

By the hand applied to the parietes of the abdomen externally, no tumour was detected. There had been no vomiting. M. Recamier, founding his opinion upon the intensity and course of the nephritic pain, and the small quantity of red and sedimentous urine which was discharged, suspected the existence of nephritis. The result of the examination after death of the head and chest need not be detailed, the viscera of the abdomen alone presenting any important lesions. The stomach was not diminished in size; its mucous membrane was injected, but otherwise healthy; the small intestines were in their normal condition; the ileo-cæcal valve was red; in the large intestines, many of the mucous follicles were found considerably enlarged. The liver was of its ordinary size, very yellow, and on cutting into it, communicated a greasy coating to the scalpel. The pancreas, at its middle and its smaller extremity, was increased to twice its ordinary volume, and adhered to the inferior part of the depression in the left kidney, compressing the ureter at its origin. Its right extremity was healthy; the diseased portion was of a greyish colour, hard and consistent. The scalpel, on cutting into it, caused a creaking noise. Its section presented a lardaceous appearance. Both kidneys were healthy. The pelvis of the left kidney was dilated; in consequence no doubt of the compression, experienced by the ureter, from the diseased pancreas. The rest of the urinary organs were in a healthy state.

Extract from the Report of M. Forge. A cancerous affection of the kidney, (pancreas?) either confined to this organ, or extending from it to the neighbouring parts, is a very rare disease, the diagnosis of which, in consequence of our ignorance of the functions of the pancreas, it is very difficult to establish. Cases of this disease are related in the thirtieth letter of Morgagni; in a Latin dissertation of Rakan of Gœttingen, 1796; in the *Anatomie Médicale* of Portal, Vol. V.; in the *Anatomie Pathologique* of Andral, Vol. II. p. 582, and in the *Archives Generales*, Vol. XVI, p. 32, by M. Briere.

12. *Partial Gangrene of the Lungs, terminating favourably.*—The following case is contained in the *Jour. Hebdom.* Vol. III. We extract our notice

of it from the *Archives Générales* for August 1830. The patient was a porter, aged thirty years; of a tolerably strong constitution; had laboured under catarrhal symptoms for some time preceding his admission into La Pitié, under the care of M. Louis, on the 1st of May 1830. At first, his symptoms were heat, thirst, anorexia, oppression without pain, expectoration white and fetid, brought up with difficulty; his strength was diminished; obliged to remain in bed. The symptoms continued for six days nearly the same; after this period, however, the expectoration became of a reddish brown, and was still fetid; the debility of the patient was less, and he was able to leave his bed. On the 2d of May, attitude natural, movements free and varied—no appearance of prostration; respiration somewhat accelerated; expectoration tolerably copious, of a reddish-brown colour, and gangrenous odour; breath, also, equally fetid. Percussion obscure on the back, right side, and for two-fifths of the centre of the chest; respiration somewhat rough, with slight sound of friction; a weak ringing of the voice; no traces of crepitation; heat of surface somewhat increased; pulse 80, tolerably large; thirst moderate; nothing else remarkable. Twelve ounces of blood were taken away. The blood covered with a greyish-yellow coat, moderately firm, and surrounded with but a small amount of serosity. On the 4th, expectoration abundant, clear, and perhaps less fetid than on the 3d. Great crepitation on the right side of the back, slight pain at the same spot, pulse 64, no increase of heat. From this time until the 5th of June, when the patient quitted the hospital, the expectoration became less mucous, greenish, opaque, afterwards almost colourless, and gradually less fetid, until the 9th, when it had merely the peculiar odour of moist plaster; on the 10th, in consequence of a slight excess, the matter expectorated became at times, as it were, muddy, and more fetid than on the previous day; it continued fetid until the 13th, on the evening of which day there occurred a spitting of blood, to the amount of about two ounces. The succeeding day, fetor of expectoration diminished; bleeding, to eight ounces. The hæmoptysis did not return; the matter expectorated, lost gradually, its fetor, and assumed a more favourable appearance. On the 21st, it had scarcely any odour, and was of the appearance of that expectorated in simple pulmonary catarrh. After the 24th, it was entirely without odour; and from the 29th, both cough and expectoration were absent. The pulse remained always calm. There were no secondary symptoms, other than those described, and the patient was in a state of perfect health when he quitted the hospital, on the forty-eighth day from the first of the attack. According to M. Louis, the odour of the expectoration left no doubt as to this being a case of partial gangrene of the lungs. He does not think that a circumscribed gangrene of these organs in an individual, in the full vigour of life and in perfect health, is necessarily fatal, hence the favourable termination of this affection is not, perhaps, a very rare circumstance. In three other individuals, in whom gangrene of the lungs occurred, that fell under his notice within the last seven months, one alone died, and he had expectorated fetid matter for eight months previous to his admission into La Pitie. It is proper to remark, that in all the four cases here alluded to, the gangrene occurred in the right lung.

13. *Case of Trismus from decayed Teeth and Cold.*—In the October number 1830, of Johnson's Review, we have the following case. The only remarkable feature it presents is the readiness with which the symptoms apparently of a formidable disease gave way under a very simple treatment. Caroline Lewis, aged twenty-four, admitted into the Westminster Hospital under Mr Lynn, December 21, 1829, with her jaws firmly locked, complaining of great pain in her head and neck. It appears that her jaws closed suddenly one afternoon (three days before her admission) and resisted all her efforts to open them. She had suffered from a cold for a fortnight before, which had swelled her face inside and out, accompanied with most violent toothach. From her earliest recollection she had been troubled with frequent and severe attacks of toothach, being scarcely ever a month free. She menstruates regularly but scantily. Two or three of her side teeth being reduced to mere stumps, enabled her to swallow any liquid through

the opening they had left. December 21, a powder composed of four grains of calomel and half a drachm of jalap was directed internally, and three spoonfuls of the following mixture every four hours: liq. ant. tart. one ounce, liq. ammon. acet. three ounces, mist. camph. five ounces: m. f. She was bled to twelve ounces and fomentations were applied to the cheeks. 22d. There was less fever, and some abatement of the pain in the head and face. The fomentations and mixture continued. 23d. Much the same. Bowels freely opened. Fomentations to the face of lin. volatil. c. Two eggs per diem for diet. 24th. She was much the same all the morning, but complained of nausea, which increased, and towards evening a violent fit of vomiting came on; she felt as though choking, when experiencing a "crunching" attended with violent pain, her mouth opened. 25th. Much better, pain in the face less. 26th. The glands on the right side of the neck somewhat enlarged, and her face not quite free from pain. On examining her mouth, the whole of her teeth, with the exception of the three or four front ones, were found to be in a state of decay, most of them that remained being merely blackened stumps; tongue tolerably clear; bowels confined. January 3d. Dismissed well: she refusing to have any thing done to her teeth.

14. *Inflammation of the Inferior Cava—Œdema of the Lower Extremities—circulation by anastomosis.*—A very interesting case of phlebitis occurring in the inferior vena cava is reported by Dr Hourmann in the French Lancet, an abstract of which we obtain from the *Journal Universel, tom.* 58, *cahier* 174. On the 8th of May 1830, a man, following the business of a porter, was admitted into La Pitié. He was fifty years of age, of apparently good constitution, and had hitherto enjoyed uninterrupted health. Some weeks previously to his entrance into the hospital, he had fallen upon a stair way, and struck the right side of the chest violently against one of the steps. He was, however, able to rise; leeches were applied, but a dull pain continued to be felt at the spot. About fifteen days subsequently, he perceived a swelling of the right foot, extending soon to the whole limb of that side. A pain, which he compared to a sense of stiffness was felt in the right groin, especially when he attempted to walk. The swelling of the limb progressively augmented; the sense of uneasiness in the groin extended to the iliac fossa, when the left inferior extremity, heretofore unaffected, began to swell. This was his condition when he entered the hospital. No disturbance of function was visible in the viscera, and with the exception of the intumescence of his limbs, he complained of no disease. M. Louis pronounced it to be a case of phlebitis, which had commenced in the right crural vein and extended thence successively to the external iliac, primitive iliac and finally to the external iliac veins. Until the latter vein had become involved in the inflammation, the circulation of the left inferior extremity experienced no impediment, which explains why no infiltration took place previously on this side. In the course of a few days many veins began to develope themselves beneath the skin, commencing at the groins, and gradually passing up over the parietes of the abdomen, towards the lower part of the chest. One of these veins, on both sides, extended to the neighbourhood of the axilla. Their volume was at first inconsiderable, but it soon increased, and those which passed to the arm pits attained finally the size of a goose quill. When compressed, the blood accumulated in them below the finger. If the veins were first emptied by pressing the blood towards the chest with the finger, they were quickly refilled by the blood darting into them from towards the groins. Independent of the development of these veins, there could be no doubt of an impediment existing to the passage of the blood, through the inferior extremities, by the ordinary route. The blood arriving at the groin, not being able to pass through the crural vein, escaped into the saphena, and from thence, inverting by its impulsion the natural course of that which arrives from the abdominal parietes, it formed itself a passage towards the heart through the veins of the integuments. The case assumed a very favourable aspect—from some indications of a pleuro-pneumonia of the left side, it was at one time, however, feared, that the ordinary result of phlebitis had occurred—the passage of pus into the circulation. But by

prompt remedies the symptoms alluded to speedily gave way. M. Louis confined himself, so far as it regarded active remedies, to repeated bleedings. On the 27th of June the patient was so far recovered as to desire his discharge.

15. *Arachnoiditis Spinalis.*—The following case, which may be adduced in confirmation of the opinions of Bellingeri in relation to the functions of the spinal marrow and nerves, is related by J. Arrigi in the *Annali d' Omodei*, March 1830. The following notice of it occurs in the *Journal des Progres, &c.* 1830, tom. 3. Louis Vecchi, twenty-four years old, of a robust constitution, had been attacked one year previous to his present disease with a paroxysm of acute gout. He was seized, in the month of January 1827, with an acute pain of the muscles on the left side of the neck, without fever. Dr Arrigi considered this pain to be rheumatic and accordingly treated it by repeated application of leeches, emollient fomentations and plasters of cicuta and hyosciamus. These means produced no abatement of the pain. Febrile symptoms made their appearance; the relator was now convinced that his first diagnostic was incorrect, and was led to believe that the pain felt in the flexor muscles of the neck was symptomatic of an affection of the spinal cord or of its envelopes. He accordingly applied along the cervical vertebræ a large quantity of leeches and cups, giving at the same time internally the ext. cicutæ, laurel water and the alcoholic extract of nux vomica. Drastic purgatives and general and local baths were also resorted to, but all without effect. A blister was then applied to the neck and kept open; the pains, however, still remained equally acute. The sufferings of the patient were only calmed for a period by opiates. The case remained thus for three months, when to the pain were added a difficulty of respiration and deglutition, and an entire inability to perform the movements required in mastication. Exhaustion was soon manifest in consequence of the patient being unable to take any other than liquid aliment. The face became red and thin; the eyes surrounded with a livid circle. The neck, bent towards the left shoulder, could not be made straight in consequence of the permanent contraction of the flexors of that side. Obstinate costiveness took place and the patient survived but a short time. —On an examination of the body after death, a slight effusion of blood was discovered, between the spinal dura mater and arachnoid, from the atlas to the last cervical vertebra. The arachnoid was itself spotted and reddened, and as it were of a velvet appearance, at that part which corresponded with the anterior and left lateral faces of the spinal chord. The pia mater presented the same appearances, with the exception of its being rather more consistent than ordinary, and of some red points on its left aperture, and in the nerves which pass from thence; the spinal marrow presented no alteration. Comparing these morbid appearances with the phenomena observed during life, Dr A. inquires, whether the very decided inflammation of the membranes, enveloping the left lateral cord of the spinal marrow; an inflammation which extended even into the substance of the cord itself, and into the corresponding nervous filaments; does not confirm the opinion of Bellingeri, (who considers the lateral fasciculi of the spinal marrow as presiding over the organic functions) inasmuch as during life, mastication, deglutition and respiration were sensibly affected. The Doctor conceives, also, that the inflammation of the apertures of the pia mater and of the arachnoid enveloping the anterior cords of the cervical portion of the spinal marrow, indicates that these fasciculi are appropriated only to the movement of flexion, the evidence of which he conceives is derived from the spasmodic contraction of the flexor muscles of the neck, which fact also confirms the opinions of Bellingeri upon the functions of the spinal marrow.

16. *Hypertrophy of the Muscular Coat of the Stomach.*—Johnson, in the October number of his Journal, presents the following case from the *Journal Hebdomadaire.*—It is related by M. Reynaud. A labourer, aged fifty-eight years, of a robust constitution, was seized, towards the end of May 1828, with symptoms of the epidemic which then prevailed in Paris. For two or three months, this man had complained of loss of appetite, urgent thirst, pains in his limbs and arms, which last had diminished, but never entirely disappeared, and were succeeded

by paralysis of the lower extremities. In fact, for three months before his death, he was entirely disabled from walking. When he came under the reporter's care, the hands and arms were still the seat of darting pains, and were contracted and distorted. He now also complained of constant pain at the pit of the stomach and under the sternum. His appetite had been quite gone for a month. The epigastrium offered great resistance on pressure—the vomitings were frequent—the tongue was moist and natural—thirst considerable—obstinate constipation—skin dry—pulse slightly accelerated—emaciation advanced. These symptoms continued until the 3d of April, when the patient died.

Dissection. Passing over the appearances discovered in the head and thorax, we find that the stomach was more ample than natural, and had contracted some adhesions with the liver. The organ contained some undigested matters, and about two pints of a dark coloured fluid. The mucous membrane was rather thinner than natural. The pyloric orifice would scarcely admit the point of the little finger. There was a thickened and *scirrhous* state of the cellular substance interposed between the coats of the stomach for a short distance around the pylorus. But the whole parietes of the organ were in a state of great hypertrophy. This was seated in the muscular tissue of the stomach, which was as red as the fibres of any of the voluntary muscles. The lesions whch were discovered in the cortical substance of the brain were supposed to account for the loss of sense and motion in the lower extremities. "But as they did not appear satisfactory to us," observes Dr J., "we shall not occupy space with them here." The hypertrophy of the muscular coat of the stomach is curious and interesting. We regret, however, that Dr J. has not thought proper to present to us the examination of the head and chest as detailed by the relater, particularly as we have not by us the number of the journal in which the case originally appeared. Had we been presented with what this gentleman calls "the minute but useless details of dissection" from the period of Bonetus to the present, we are well persuaded that we should have had less reason to complain of the obscurity with which many points in pathology are now enveloped. We shall never arrive at any thing like certainty in our science until all are convinced of the necessity of examining minutely, in dissections, into the condition of every organ, and carefully recording *all* the morbid appearances met with, however uninteresting they may appear at the time.

17. *Enlargement of the Sub-Maxillary Gland, caused by a Bristle introduced into the duct of Wharton.*—We extract this curious case from the August number of the *Revue Médicale*, 1830. It is related by M. Robert, anatomical aid to the faculty of medicine of Paris. This gentleman was consulted in the month of September 1829, by the porter of the house in which he resided. He was a shoemaker by profession, forty years of age, of a lymphatic constitution. For some time past he had a swelling in the right sub-maxillary region, attended with but little pain. It frequently varied in its bulk, but this was always considerable; it was attended with a frequent discharge from the inferior part of the mouth, of a muco-purulent fluid. The sub-maxillary gland rose above the level of the lower jaw, and appeared to be enlarged to about three times its ordinary bulk. Pressure upon it did not increase the pain, but caused a rather copious discharge to take place from the duct of Wharton, and from a small accidental opening alongside of it. M. Robert suspected at first the presence in the duct of a salivary calculus, but a probe, introduced into the orifice of the duct, passed for about an inch in the course of the latter without indicating the presence of any foreign body. M. R. presumed, therefore, that in consequence of exposure to cold and humidity the patient was affected with a chronic inflammatory engorgement of the sub-maxillary gland. He in consequence directed the neck to be covered during the day with a large and thickly wadded cravat, and at night with emollient cataplasms; in addition gargles—a bitter tisane and occasional purgatives. Three months passed without any change occurring in the symptoms, when one day the patient came to M. R. to inform him that the end of a hog's bristle projected from one of the small ulcerations in the mouth, and pricked his tongue. The bristle was easily extracted by the forceps,

and by the end of a week the swelling, pain, and discharge entirely disappeared. The bristle extracted was one of those used by persons of his trade, to direct the thread in sewing shoes. A portion of these is frequently bitten off between the teeth. The portion which in this case had insinuated itself into the duct of Wharton was about two inches long, and bent to an angle at one of its extremities. The inflammation caused by the presence of the bristle in the duct had no doubt been propagated along the latter to the whole substance of the gland. If cases similar to this have been previously observed, they must be very rare; none such is recorded in any of the works that have fallen under our notice. We have, however, seen one case of intumescence of the sub-lingual gland from the insinuation into one of the ducts of a minute splinter of wood.

18. *State of the Salivary Glands when under the Mercurial Influence.*—It is very generally believed that the salivation produced by mercury is the result of an inflammation of the salivary glands; but in an examination made by M. Cruveillier, of these glands in an individual who had died during a violent salivation caused by the administration of eight grains of the proto-chloride of mercury, they did not present any traces of inflammation. The cellular membrane between the lobulæ of the glands was the seat of a slight serous infiltration. This fact is recorded in the *Compte Rendu des Travaux de la Société Anatomique, par M. Bérard, Secrétaire, Rev. Méd. Juin* 1830.

19. *Membranous Inflammation of the Cheek.*—This affection is particularly described by M. Guersent in the ninety-first number of the *Journal Hebdomadaire.* It differs from the ordinary form of gangrene of the mouth in being a much milder disease. It is more frequent in childhood than in adult life. In the commencement, the mucous membrane of the cheek appears a little swollen, and beneath the epidermis there form small membranous patches, which finally coalesce, and spread over the cheek, gums, tongue and neighbouring parts. The glands of the neck become more or less enlarged; as yet, however, there is no ulceration of the cheek. In the second stage the intumescence of the glands in the neck is increased, the face is tumid, the breath fetid, the layers of false membrane on the inside of the cheek become detached and assume a greyish colour, and a copious sero-sanguineous discharge occurs. There is generally not much fever; the pain varies in different subjects, the salivary secretion is always abundant. In its third stage the progress of the disease is slower, and it may terminate either in gangrene or resolution. If the latter, the sloughs being thrown off, the denuded surface is surrounded by a reddish areola, which contracts the ulcer from the circumference towards the centre, whilst absorption appears to be at work on the border of the membranous exudations. In other cases, when the part affected is extensive, absorption takes place in various spots even from the commencement of the disease. This affection may disappear and again return several times in the same individual. When it extends to the submucous cellular membrane, it is very apt to terminate in gangrene, which, however, never possesses the malignity, nor advances with the rapidity of the true gangrene of the mouth. The disease is seldom attended with danger, nor in the opinion of M. Guersent is it contagious. It occurs chiefly in children debilitated by chronic affections, bad food, or the air of hospitals; it often follows small pox and other eruptive diseases, and appears, in the judgment of our author, to depend on a general alteration of the fluids. It seldom passes from the mouth to the larynx; one example of this kind was observed two years ago in the practice of M. Jadelot. With respect to the treatment, topical applications only are of benefit. If much pain is felt, and the glands of the neck are considerably swollen, the application of leeches will be of advantage. A mixture of muriatic acid and honey in equal proportions, or with a greater quantity of the acid, if necessary, M. Guersent considers to be the best application to the part affected. He is partial also to the nitrate of silver; care being taken not to allow any portion to be broken off in the patient's mouth. When other diseases co-exist with the one under consideration, they are of course to be combated by the treatment adapted to each.

20. *Small pox and varioloid epidemic in Copenhagen.*—In a history of the epidemic small pox which reigned in Copenhagen from 1825 to the summer of 1827, by Dr Mœhl, contained in Otto's *Bibliothek for Læger*, Januar-Marts 1828, we have an account of the result of six hundred and twenty-three cases. Of these thirty-five, or five and two-thirds per cent died; namely, among one hundred and seventy-eight cases occurring in the unprotected, thirty-three deaths took place, or eighteen and a half per cent, and of four hundred and thirty-eight cases which occurred in the vaccinated, two terminated fatally. But in neither of the fatal cases was there any certainty that the patients had been effectually vaccinated.

21. *Cases showing the effects of the suppression of habitual evacuations.*—Three or four cases are reported from the practice of M. Louis, in La Pitie, illustrative of the effects of suppressing habitual evacuations: our account of these is derived from the *Medico-Chirurgical Review* for October 1830.

Case 1. A coach driver aged twenty-five years, had suffered from an ulcer of long standing on each of his legs; of these he was cured in La Pitie in the space of six weeks, and discharged. In about three weeks afterwards, he returned to the hospital, complaining that in two days after he had left it, without any ostensible cause, he was seized with acute pain in the left flank, and also in the left side of the chest, attended with some fever, loss of appetite, and diarrhea, but without cough or expectoration. Bleeding did not relieve these symptoms. When examined on the 28th of April, the day of his re-admission, the following was his condition: heat of surface increased; pulse rather accelerated; thirst; white tongue; ten motions in the twenty-four hours; acute pain in the left flank, increased on pressure, and extending to the groin of that side; a tumour developed in the left hypochondriac region, protruding several inches beyond the level of the false ribs. The inferior part of the left side of the chest sounded dull, and no respiration was there heard, but it was clear in every other direction. The tumour appeared to M. Louis to be an enlarged spleen; and he thought this enlargement, as well as the diarrhea, was owing to the suppression of the long established drain from the ulcers on the legs. He accordingly endeavoured to re-establish the discharge by means of a large blister to the leg, and twenty leeches to the left flank and side of the chest. In two days the pains had nearly ceased, and the diarrhea was much diminished. The size of the spleen also decreased rapidly, and by the 19th of May, there was no vestige of tumour in the left side, and the chest on that side was sonorous throughout. He was discharged cured. We forgot to mention that an issue had been established in the flank.

Case 2. This was a deaf, but very intelligent person, about fifty-five years of age, who came to La Pitié in the beginning of last winter, with a large ulcer of several years standing, on the malleolus internus. It was dressed regularly every day and soon healed. In two or three days after the complete cicatrization, the patient, who had previously been in good health, lost his appetite, had nausea, uneasiness, lassitude, without any other symptom that could indicate any particular disease. These symptoms continued to increase for eight days, when M. Recamier applied a large blister to the seat of the healed ulcer. As soon as a suppuration was established, all the symptoms diminished, and in the course of a week, they entirely disappeared. The patient remained three months in the hospital, and had no return of complaint. The blister was then allowed to heal, and health continued.

Case 3. A female, aged forty years, had a vaginal discharge for several years, which was suddenly and totally suppressed by a severe moral affection. From that time the appetite and strength diminished—she complained of pains in the epigastrium; wasted in flesh; and, after three months, was obliged to enter the hospital. M. Louis endeavoured to re-establish the vaginal discharge by means of the vapour bath—sinapisms, &c.; and in about eight days, by these remedies succeeded in doing so, from which period all the symptoms above mentioned gradually diminished, and at length disappeared.

Case 4. A female, aged sixty-two years, was received into the hospital on the 23d of May last. The catamenia had ceased about twelve years previously, since which she was subject to palpitations of the heart and pains in her head. For

these she had been bled eight times. Her legs swelled occasionally in the evenings. During the last six months she had leucorrhœa of inodorous character. Having been severely frightened by some ruffians, and beaten by them, the discharge suddenly stopped, and soon after this she felt depressed, with headach, giddiness, some obscurity of vision, constant drowsiness, cramps in her limbs, with some dyspnœa and œdema of the feet. Nevertheless she was free from the palpitation, but her appetite disappeared. These symptoms continued unabated for eight days, and were in the same state when she entered the hospital on the 23d of May. She appeared to have a good constitution; pulse eighty-four, regular, as were the motions of the heart, which presented no appearance of enlargement; lungs sound. A large blister was applied to the inside of the right leg; vapour baths to the lower half of the body; sinapisms to the feet. 24th. Pulse ninety-six; other symptoms unchanged. Twenty leeches were applied to the lower extremities. 25th. During the bleeding of the leeches, the leucorrheal discharge partially returned, but did not continue. The symptoms, however, were all mitigated, and when the blister came to discharge freely, they disappeared, with the exception of considerable debility, which required tonics and nourishing diet. Some threatenings of her former symptoms, however, required the establishment of an issue in the thigh, which entirely removed them. The foregoing cases are certainly highly interesting; they afford a caution to young practitioners, not to suppress suddenly any discharge which has been long established in any part of the system. We have at the present time under our care a lady about sixty years of age, of a good constitution, by whom we were some years since consulted, in consequence of an ulcer on the right ancle, which was connected with a varicose condition of the veins of the leg, and had existed for a considerable time—it was attended with a great deal of pain and considerable discharge. Under an appropriate treatment the varicose condition of the veins became very much improved, and the ulcer healed completely. About a week after its entire cicatrization, the patient was seized suddenly with a violent pain in the left side, about the lower part of the chest, a sense of suffocation, quick and hard pulse, and delirium. Bleeding, purgatives, and a blister to the seat of the pain failed in removing the pain and oppression of the chest, though they abated the delirium; vesication, however, being induced upon the cicatrix of the ulcer, and dressed with basilicon ointment until suppuration was established, all the symptoms were very speedily removed, and so long as the sore existed did not return. Twice since then the ulcer has been healed up, and both times has been followed by the same symptoms as those described, though in a more violent degree, and they have only disappeared upon the establishment of a suppurating surface, at the seat of the original ulcer, during the continuance of which her general health is always good.

IV. THERAPEUTICS.

22. *Treatment of Leucorrhœa.*—In a small octavo volume lately published in London, under the title of "Practical Observations on Leucorrhœa, Fluor albus, or Weakness, with cases illustrative of a new mode of treatment," Mr George Jewel enters somewhat fully on the nature, character, signs and treatment of this disease. We confine ourselves to an abridged statement of the plan of treatment he proposed. Mr Jewel places the most perfect reliance on the local application of the nitrate of silver, but at the same time is anxious to impress on the attention of the practitioner the necessity of resorting in all instances to what are termed general principles. He recommends tepid ablutions, consisting of one part of vinegar to two parts of water. He thinks that more harm than good is done by cold sponging the loins, so often had recourse to. In his opinion the cold bath is often hazardous, particularly when the patient is enfeebled by the discharge, easily put out of breath and when her digestive organs are disordered. He does not seem to have a high opinion of cantharides, as recommended in

England and in this country, and states that astringent injections have usually failed to cure this complaint.

Mr Jewel's mode of practice in this troublesome disease will be exemplified by the following case:

"S. J., aged forty-nine, admitted a patient under my care, at the St George and St James's Dispensary, on the 10th of June. She is the mother of fourteen children, exclusive of two abortions, and has, during the last twelve months, been subject to profuse catamenia and excessive leucorrheal discharge, of a yellowish colour. She has pain in the loins, shooting in paroxysms through the region of the uterus, in which there is also a sense of fulness and throbbing. She complains of a great languor, with loss of appetite and uneasiness at the pit of the stomach. She is frequently attacked with the globus hystericus, and disturbance about the head, and says that a flow of tears affords her much relief. Pulse eighty-five. Bowels confined.

Ten ounces of blood to be abstracted from over the sacrum by cupping.

R. Magnes. sulph. . Six drachms.
Infus. rosæ . . Seven and a half fluid ounces.
Acid. sulph. dil. . One drachm.

M. ft. mist. cujus sumantur cochlearia duo vel tria ampla, mane quotidie.

R. Argent. nitrat. . Twelve grains.
Aq. distill. . . Six fluid ounces. M. ft. injectio.

14th. During a period of twenty-four hours after the cupping, she felt extremely faint and sick, and now complains of increased languor. Says she has used the injection regularly, notwithstanding the presence of the catamenia, and that it occasioned no degree of pain, except a little smarting; the parts having been for some time in an irritable state. To omit the aperient medicine. The strength of the injection to be increased from two grains to four to the ounce of water; and to take a pill, containing five grains of the extract of hyosciamus and half a grain of opium, at bed time.

18th. The sanguineous discharge has ceased, having continued only a week, its usual period being from ten days to a fortnight. The leucorrheal fluid has become white and thinner than it has been for several months. The local pains are greatly relieved, but she still complains of occasional heat and throbbing about the womb. To continue the injection.

22d. The leucorrhœa has ceased, and the local heat and pains have almost left her. There is still great languor and loss of appetite.

R. Infus. rosæ . . Seven and a half fluid ounces.
Sulph. quinin. . One scruple.

M. ft. mist. cujus sumantur cochlearia duo ampla, ter die.

To continue the injection.

26th. The vaginal discharge has not re-appeared. Her spirits are better, and the appetite improves.

Continuentur remedia.

30th. There is no leucorrhœa. Her general health continues to improve, and she intends to go into the country in the course of a few days. Discharged cured."

The mode of application of the nitrate of silver, which Mr J. has employed is either to conceal the caustic in a silver tube precisely on the principle of its application in strictures, or to use a solution of the nitrate, in the proportion of three grains to the ounce of water, gradually increasing the strength either in the form of an injection or in the following manner. A bit of sponge, firmly and neatly tied to a piece of whalebone, is to be moistened with the solution, and carefully introduced into the vagina up to the os uteri. This mode, he conceives, is preferable to injections, and can be effected by the patient herself.

Mr Jewel speaks favourably of iodine in leucorrhœa. After remarking on the influence of this remedy in the glandular parts of the body, he states that its effects upon the uterine system in particular, in almost all the cases in which he has employed it, have been marked and decisive, and that he has every reason to believe iodine is peculiarly adapted to assist in the removal of leucorrheal disease.

Our readers, by a reference to the sixth volume of this Journal, page 306, will perceive that this remedy has been used advantageously in leucorrhœa by one of the editors, Dr Bell, who has also found it to act promptly in the uterine system.

23. *Treatment of Strumous Iritis.*—Mr Middlemore, assistant surgeon to the Birmingham Eye Infirmary, has published, in the eighth number of the Midland Medical and Surgical Reporter, (May 1830) a quarterly report of the cases treated at that establishment during the last three months. From this report we extract the following remarks on the treatment of strumous iritis. "It would be trifling to enumerate the various plans of treatment recommended for the cure of this troublesome disease; no 'one plan' will succeed; a treatment directed to the circumstances of each particular case will always be necessary; for a delicate child, I should advise small doses of the hydrargyrus c. creta every morning; a grain of quinine twice a day; every other evening a warm bath, and should the skin be harsh and dry, notwithstanding its employment, friction with the hand, or with a soft brush, should be used, and on no account should suitable clothing, with a view to maintain perfect warmth of the surface, be neglected. A small issue in the arm; moderate (not fatiguing) exercise must not be omitted, and perhaps riding on horseback surpasses in excellence all other modes of taking it; without specifying any particular articles of diet, I may say, in the general, that it should be of a light and nutritious character, animal food being allowed only every other day."

Mr M. has been experimenting with the spirit of turpentine in ordinary iritis, and the results appear to be confirmatory of the observations of Mr Carmichael and Mr Guthrie. He has given it with great advantage to patients who, from delicacy or peculiarity of constitution, are unable to take mercury to the production of salivation.

Mr M. strongly recommends the exhibition of a drachm of turpentine two or three times a day, in those cases in which after the acute symptoms have been relieved by mercury, there remains a chronic disorganizing inflammation in the part. He moreover urgently recommends the early exhibition of the same remedy in choroidal and retinal inflammations.

The substance of this article is borrowed from the *Medico-Chirurgical Review.*

24. *Acetate of Morphia in various diseases.*—Dr Bardsley, in his "Hospital facts and observations, &c." a work already quoted in this Journal, has entered somewhat largely on the use of the acetate of morphia in various diseases. He has found it particularly useful in cases of pain at the pit of the stomach, in pyrosis, in uterine diseases, and in neuralgia. Not having the work before us at this moment, we shall quote a few cases, as abridged in the Medico-Chirurgical Review for October last.

Michael Sharples, aged twenty-nine, an industrious man with a numerous family, had experienced much pain at the stomach occasionally for several months, and so severe had it been for the last three weeks, that he could not follow his usual employment. His spirits were low, appetite gone, and bowels costive. Leeches and a blister had been tried. The bowels being opened by purging medicine, a quarter of a grain of the acetate was given three times, daily, with excellent effect. In five weeks he was discharged cured, but he subsequently applied with a relapse, which was combated successfully by the same plan of treatment.

We will cite another case.

A young man had suffered for some months from such a gnawing pain at the stomach, that he could not continue his occupation, was reduced to poverty, and at last attempted to poison himself by laudanum. After a short course of aperients, Dr Bardsley gave half a grain of the acetate twice, daily; so much relief ensued that the dose was diminished; and after the expiration of several weeks, he perfectly recovered both his mental and bodily strength.

In the only case of pyrosis which Dr Bardsley details, the patient, a female aged twenty-six, had always been delicate, but suffered severely for the last two months, from gnawing pain at the pit of the stomach, copious discharge of an

acid fluid from the mouth, flatulence and capricious appetite. After castor oil the acetate was prescribed, a fourth of a grain twice, daily; and in six weeks the patient was discharged cured.

It is not to be supposed, however, that Dr B. regards the acetate of morphia as a sovereign remedy in all cases of dyspepsia. So far from this he alludes to several cases of the disease in which the remedy was productive of little or no relief. This is exactly what we should have anticipated, from the known effects of the remedy, and the diversity that exists in the nature and characters of dyspepsia. Dr B. does not appear to think as favourably of *opium* in stomach complaints as of the morphia, and among the cases he details we notice some in which the former of these remedies had been used ineffectually before Dr B. resorted to the latter. In our own practice we have seen opium very useful and even completely successful in that complaint. In all such cases the pain recurred after eating, and continued so long as the articles ingested remained in the stomach. Under such circumstances a small dose of opium given half an hour before meals, and repeated during a week or two, sufficed to effect a cure. It is very plain that in these cases the pain was nervous and not the result of inflammation, and that care was taken to ascertain the true nature of the disease before resorting to this plan of treatment.

Dr B. has used the same remedy with palliative and remedial effect in scirrhus and induration of the uterus, and particularly in painful menstruation. In a case of the latter disease he ordered the patient "to take a quarter of a grain of the acetate of morphia on the first accession of pain, and to continue this proportion every half hour, whilst it was violent. The second dose afforded her very great relief, without in the least suppressing the discharge," and at the time Dr B. was writing she took the morphia at every monthly period, with the same advantage.

Nor did Dr Bardsley use the morphia with less advantage or success in neuralgia of the face, forehead, lower jaw, &c. In all these cases the remedy was administered internally. On the subject of this remedy Dr B. makes the following general remarks:

"The above examples seem sufficient to establish the remedial efficacy of the acetate of morphia in several affections. It must be allowed, that morphia has not always answered the intentions with which it had been employed; but the proportion of the favourable cases has been considerable, compared to those in which it has failed. I have never witnessed any *pernicious consequences* from a prudent use of the morphia. I am led to recommend the acetate of morphia in preference to opium, from a conviction that its efficacy may be equally relied upon, whilst its administration will be unattended by the *distressing headach, excessive constipation and other unpleasant symptoms* which that drug in large doses mostly induces. It appears to be the chief advantage of morphia, that it may be employed in those cases in which it is desirable to obtain a narcotic effect, and at the same time of the first importance to avoid constipation. It is proper to unload the bowels before commencing with the acetate, so as to give the remedy a fair chance. It is prudent to commence with not more than a quarter of a grain, which may be gradually increased to half a grain, a grain or two grains, according to the urgency of the symptoms and the effects produced. These doses are applicable to adults. I have mostly prescribed it in this form of pill, which seems to answer very well."

25. *Treatment of Amaurosis by the external application of Strychnia.*—Mr Middlemore, from whose Quarterly Report of cases treated at the Birmingham Eye Infirmary we have already offered an extract, recommends the use of strychnine in those cases of amaurosis produced by the overstraining the unnatural or diminished stimulus of the visual organ, or by any cause capable of impairing the tone or vigour of the retina without producing disorganization of that delicate part, accompanied or not with diminished strength of the constitution. "In all these cases, I believe, the strychnine is calculated to produce great and permanent advantage, in combination, of course, with other remedies suited to the particular exigencies of the case—for example: if the retina be weakened in consequence of diminished vigour of the system, remedies adapted to strengthen the system, and a removal of the cause enfeebling it, might be joined to the local

application of the remedy in question. But the power of the retina will not always return with the returning strength of the system. In such cases the strychnine is singularly valuable, producing, with wonderful rapidity, the restoration of the organ of vision. The strychnine given internally does not produce the same beneficial effect upon the retina, as when applied externally. The mode of using it is already before the profession." After having tried it in a variety of ways, and in different situations, Mr M. has not been able to discover a better method than that of blistering the skin above the eye brow, and after having carefully removed the cuticle, sprinkling the powder upon the raw surface, taking care to pass a spatula upon the part to secure the powder against removal and insure its absorption. The quantity with which Mr M. commences is the twelfth of a grain upon each side, daily augmenting the quantity as the patient is able to bear it, until it amounts to two-thirds of a grain upon each blistered surface. Its first effects are slight pain in the head, increased power of vision, and severe smarting pain of the part upon which it is applied. "Some patients, Mr M. remarks, cannot bear its application; others require great care, and a very gradual augmentation of the quantity to enable them to bear it; while others will admit of its application without experiencing any other uneasiness than what arises from its action upon the sore."

In reference to the cases in which the remedy in question would be injurious or useless, Mr Middlemore remarks, "if the amaurosis be dependent on any morbid condition of the brain; any alteration of the bony structure; any tumour or other substance pressing upon the optic nerve, the effect of former inflammation, such as opaque deposition or partial disorganization, the effusion of blood or morbid growths, the enlargement of the vitreous, or displacement of the crystalline humour, producing pressure upon the retina; a varicose state of vessels, as a consequence of distention,—so continued as to impair their tonic and elastic properties; inflammation or disease of those parts encased by, or anterior to the retina:—no benefit could be expected to result from the use of strychnine; but on the contrary, in many cases, material injury might succeed its employment."

The subject of the external application of strychnia in amaurosis has been taken up at Edinburgh, by Dr Thomas Stocker, physician to the Royal Infirmary of that city, and known to the profession as one of the signers of the *proces verbal* of the autopsic examination of Napoleon. Dr Stocker's remarks are inserted in the October number of the Edinburgh Medical and Surgical Journal. Dr S. claims priority in respect to the employment of strychnia in amaurosis. He regards the remedy "to act purely as a stimulant, either of the nervous matter of the nerves, or of their capillary system; and, therefore, to be successfully employed only in amaurotic cases which depend on paralysis of the optic nerve and retina; and in cases of congestive amaurosis from pressure from their parts, with loaded and inactive state of the minute vessels of the neurilematic envelope." He thinks, "that in such cases, its beneficial operation is considerably aided by the previous use of mercury, possibly, either by exciting the nervous system, by rousing the energy of the capillaries, or by increasing the powers of absorption, or by all three conjointly. Several of the individuals whose cases are detailed in his essay were attacked, he adds, with erysipelas, which strychnia seems prone to occasion; but they were invariably relieved, by simply rubbing about a drachm of mild ointment or cold cream over the diseased surface, every four hours. Nine cases are detailed—some were cured; but the greater number were only relieved.

Cases to the same effect, treated at the Royal Westminster Ophthalmic Hospital of London, in which full or partial relief has been obtained, will be found described in the sixth volume of the London Medical Gazette.

26. *Syphilis cured in an Infant by Mercurial Frictions, applied to a Goat that suckled it.*—Dr Vere Delisle lately communicated a case to the Academy of Medicine at Paris, in which a woman, three months after delivery, contracted a syphilitic disease, characterized by ulcerations on the inside of the labia, and a gonorrheal discharge. The child whom she suckled was soon affected with

venereal pustules, and ulcerations round the anus. It was now made to suckle a goat; and the inside of the thighs of the animal having been shaved, two drachms of mercurial ointment were rubbed in every other day. The child was cured in a month.—*Archiv. Genérales, and Lon. Med. Gaz.*

27. *Dropsy treated with Veratria.*—Dr Bardsley, whose "Hospital facts and observations" we have so often quoted, has tested the properties of veratria and colchicum, in dropsical complaints. The former substance, as is perhaps known to our readers, is obtained from *veratrum sabadilla;* and a few grains of the acetate have been found to destroy animals, when introduced into the stomach and intestinal canal. Feeling anxious to ascertain its effects upon the human body, Dr B. exhibited it in several cases. We take the following abstract of a case from the Medico-Chirurgical Review for October.

Hugh Cairns, aged thirty-nine, had been ill three months with ascites, and anasarca of the lower extremities, scanty urine, feeble pulse, and somewhat difficult respiration. Dr B. commenced with a quarter of a grain of veratria every four hours, which not acting on the bowels with energy, was augmented to half a grain, at the same intervals. It produced several watery motions daily, the swellings diminished, the dose was again augmented to a grain twice daily, and the patient was, in the course of a month, discharged cured.

Other cases to the same effect are cited; but although from a perusal of them it is plain that the remedy is not destitute of power in dropsical diseases, we are ready to conclude with Dr Johnson, that veratria is not likely to supersede our other hydropic medicines.

Dr Bardsley has likewise experimented with veratria and colchicum, in gout and rheumatism. He furnishes a table of twenty-four cases of that obstinate disease, which were treated by the former of these remedies, and the same number put under the influence of the latter. There does not appear to be much difference in the results.

28. *Importance of Diet in Urticaria.*—The London Medical Gazette for September 4, 1830, contains an interesting communication on this subject, by Dr Badglay. After stating that he has long been impressed with the opinion, that in the treatment of disease in England, there exists too generally, a most palpable neglect of the principles of hygiene, Mr B. describes a case of urticaria, in which the greatest success resulted from proper attention to diet.

The patient, a child two years old, would have been considered, Mr B. thinks, in the eyes of persons unacquainted with disease, as being exceedingly healthy; "perhaps even the very common epithet of his being the very picture of health," might have been deemed applicable to his appearance. But every one acquainted with disease would, he adds, "have seen at first glance, that the application of such a title would have been decidedly erroneous." The child was of a corpulent habit, and sanguine temperament; but his skin was dry, rough, and on his face it was marked by irregular streaks; his eyes were dull; the albuginea slightly tinged with yellow; his tongue was covered with a yellowish white fur towards the root—from the centre forwards, it was more white and moist; his breath was fetid; his respiration, however, was slightly hurried, from the presence of a little irrirating cough, dependent, I conceived, upon the state of his stomach. His bowels were exceedingly irregular, having sometimes no evacuations for *two* or *three days* at a time, and when they occurred, the matter discharged was of an excessively fetid nature, clayey, and for the most part accompanied by the passage of much flatus. He had, also, frequent acid eructations; his appetite was described to be, generally speaking, good; his disposition lively; his temper remarkably good, except occasionally, when, from the irritation of the affection under which he laboured, he was rendered peevish and restless."

The eruption first made its appearance more than fourteen months previous. His diet, at that time, was totally unrestricted, and he was permitted to eat any thing he desired; and by the physicians who were called, no alteration in that respect were recommended to be made. The disease was at first attributed to dentition. It became at last very troublesome—the whole surface being covered,

especially a short time after the child was put to bed, with pimples, the bases of some of which were slightly inflamed. Mr B. recommended the adoption of an entirely different system of diet, and "strongly urged the *necessity* (not merely the *propriety*) of discontinuing the use of all vinous liquors, of vegetables in their green state, and soups, into the composition of which these entered; and of substituting farinaceous and light animal food. He was ordered to be put, three times a week, into a warm salt water bath, and occasionally alternating these with a bath of the nitro-muriatic acid. A dose of the hydrargyrum cum creta, with a laxative mixture, containing the tart. potass., carb. soda, and pulv. ipecac. were prescribed; and instead of increasing the cathartic power of the medicine, to meet the torpor which existed to a very great degree in the intestinal canal, this same mixture was continued until, by steady perseverance in its use, the bowels became regularly moved once, and sometimes twice every day. It was likewise suggested, that when he was taken out of the bath, his whole body, but especially his abdomen, after being dried, should be well rubbed with the hand, or a dry soft cloth. A fortnight had not elapsed, before I had the satisfaction to find, that a very great improvement had taken place in my little patient; and I am now able to state, that for the last three weeks he has been almost entirely free from a complaint, under the irritating effects of which he had laboured for fourteen months almost incessantly."

Mr B. remarks, that in requesting the insertion of this communication he has not been actuated by a view of attracting attention to the disease, which is of common occurrence, and when met by appropriate means is generally found sufficiently tractable; "but to the fact of the speedy change produced by having had recourse to those measures, which, we are instructed by the principles of therapeutics, are adapted to the particular affection."

29. *Treatment of Puerperal Fever.*—Among the most interesting articles that have recently appeared in the European periodical publications we do not hesitate to place in the foremost rank the *compte rendu* of the practice of M. Désormeaux in those cases of puerperal fever observed in 1829, at the hospital of *La Maternité*. This report is written by M. Tonnelle and inserted in successive numbers of the Archives (vols. 22 and 23). M. T. enters fully on the nature and characters of the disease, and dwells particularly on the effects obtained from different plans adopted for its treatment. For the following condensed view of this report we are indebted partly to the Edinburgh Medical and Surgical Journal and partly to the original essays themselves.

The more active means resorted to by M. Desormeaux were bloodletting, leeches, ipecacuanha and mercurial salivation. The subsidiary remedies were chiefly the warm bath and hip bath, laxatives, clysters, cinchona, cataplasms and emollient lotions to the uterus. A few words on each of these principal means is all we can conveniently present in this place.

In respect to blood-letting, M. Desormeaux found that it was often strikingly useful, or even imperatively required for subduing the reaction of the circulation in those cases in which the inflammation was of the active kind. But it is added, that although blood-letting had this effect in the early stage, it seldom subdued completely the local inflammation, and was always a remedy of questionable propriety, on account of the great rapidity with which the inflammatory stage was sometimes followed by typhoid symptoms, if it did not prove effectual. For these reasons, and also more particularly because local blood-letting, while it had all the constitutional effect desired, appeared likewise much more effectual in subduing the inflammation of the uterus and its appendages, he soon was induced to substitute in most instances evacuation by leeches for general blood-letting. Leeches were commonly applied to the belly to the amount of forty or fifty, the wounds being made to bleed by the hip bath, and afterwards a poultice. This was repeated sometimes twice or thrice, according to circumstances, even in thirty-six or forty-eight hours. When their effect was salutary, an immediate abatement or removal of pain took place, followed very speedily by copious perspiration. This remedy was of course available chiefly in the early stage of the disease, before suppuration had set in; but was also fre-

quently resorted to afterwards, as a remedy against subsidiary inflammation in the chest and elsewhere. The degree of success may be gathered from the following numerical statements. Of one hundred and sixty-five cases, eighty-two were treated by general or local blood-letting as the principal remedy; and of these sixty-three, or fully three-fourths recovered.

M. Desormeaux also employed, in the early stage of the disease, vomits of ipecacuanha, a remedy long ago resorted to in puerperal fever of the Hotel Dieu by Doucet and Doublet, and subsequently abandoned on account of the agitation produced in the abdominal viscera by the act of vomiting, and of the alleged absurdity and want of success of the practice. M. Desormeaux, who it would seem was a judicious practitioner, and a man of too much sense to allow himself to be led by theoretical notions to the abandonment of a remedy highly extolled in puerperal fever by very respectable authorities, determined to make trial of ipecacuanha. He soon found, that the first objection urged against emetics was rather a specious than a solid one, and that the second was not more substantial, deriving an apparent foundation solely from the propounders of it having neglected the influence of season on the utility of the remedies. He remarks that, on first using ipecacuanha as an emetic towards the end of 1828, he derived from it incontestable advantage,—that during the greater part of the subsequent year it was very seldom of any use, though never, so far as he could judge, injurious; that in September and October of that year, while the weather was cool and moist, and the epidemic at its worst, this remedy again became signally effectual; and towards the end of October, and for the remaining months of the year it was again inert. Among one hundred and sixty-five cases which M. Tonnelle has chosen for exemplifying the effects of remedies, forty were treated with ipecacuanha as the chief remedy; and of these thirty-two or four-fifths recovered.

This remedy was employed chiefly in the early stages—seldom oftener than once. Its action when salutary was generally followed by purging, especially when the vomiting was slight, and in every successful case by copious sweating, unless the purging was profuse. Commonly in a very few hours there was a marked amendment in the patient's state, and if this did not occur within the first twenty-four hours, the remedy was abandoned, and recourse was had to other measures.

M. Desormeaux and his pupil M. Tonnellé have satisfied themselves that the physician possesses, in *mercurial salivation*, a powerful remedy even in the worst cases where the disease assumes the typhoid variety, or in the suppurative stage of the inflammatory variety. Every physician knows that in such cases the issue is ordinarily fatal; and consequently will join M. T. in opinion, that a very moderate degree of success with any given remedy is sufficient evidence of its utility. Of forty-three cases in which mercury was used as the principal remedy, only fourteen or one-third recovered. Small, however, as this success may appear to some, it must be viewed as an important gain. Mercury was employed only when the former means were no longer available. It was used in the way of friction chiefly, two ounces of ointment being commonly rubbed, every twenty-four hours, into the skin of the abdomen and thighs, in portions of two drachms. In many of the cases where it was successful, the symptoms left no doubt that suppuration had taken place; and in some there is unequivocal evidence from the history of the cases that the veins were inflamed, nay that purulent deposits had taken place before the remedy could be brought into action. In all successful instances the operation of the remedy was attended with marked changes in the state of the principal disordered functions. The most common of these was profuse perspiration, followed by great abatement of pain. In many cases this effect was immediately preceded by abortive attempts at the establishment of ptyalism, followed in a day or two by considerable ptyalism. In other cases, profuse purging followed the use of the mercury. This, however, was not attended with exhaustion, but rather by a restoration of strength. Sometimes salivation, perspiration and purging occurred together in the same case. In some instances the mercurial action was attended with a gradual and rapid formation of a healthy purulent discharge from the uterus by the vagina.

The warm bath was used only in the commencement of the simple inflammatory cases, and when the skin was dry and hot. The hip bath was used in all cases and stages of the disease. Laxatives were seldom insisted on, and the mildest ones were resorted to. Oleaginous and farinaceous glysters were used as emollient applications. Poultices on the whole abdomen were invariably used, and always gave relief. Emollient injections into the uterus were constantly practised every four or six hours, and always with advantage. Blisters were often applied to the calves of the legs, as a stimulus, when the patient was sinking or in a state of stupor. Opiates were occasionally resorted to when the purging was too profuse, and bark was sometimes given to hasten convalescence.

30. *Effects of the contact of metallic rods in Catalepsy.*—Dr Sachse, physician at Ludwigslust, has published in the *Archiv. fuer Mediz. Erfahr.* an account of a case of catalepsy occurring in a young female, in the cure of whom the metallic rods were employed with considerable success. Several trials were made, but without success, with silver. Gold produced some effects, though much less than iron. When, during the paroxysms of the disease, the Doctor passed successively the metallic rods on the extremities, whose muscles were spasmodically contracted, they became relaxed. The patient could then extend the limbs, the joints cracking at the same time very audibly. In this way Dr S. succeeded in abridging the paroxysms of the disease. Every time he placed the patient under the influence of the galvanic action of the metallic rods, she awoke from her trance; but this effort only was momentary, and she promptly fell again into a state of somnolency, which continued until the attack had subsided. This lasted about two hours, unless cut short by the aforesaid means. The action of the metals on the eyes presented remarkable phenomena. The eye lids were no sooner touched with the extremity of the iron rod, than they began to tremble; the pupil became contracted, and the eyes were slowly closed. A gold wire produced in the eyes a sensation of weakness, attended with a greater degree of sensibility, of which the patient complained during the whole day. This effect never followed the application of the iron rod; but the action of the latter metal on the mucous membrane of the nose was rather singular, from its violence. It gave rise every time to very acute pain, and to convulsions which aggravated the paroxysm. The same effects were produced by simply approaching the wire to these organs.

We are indebted for this article to the *Archives Générales* for July 1830.

31. *Effects of bleeding in Scarlatina.*—Dr Muhrbeck, in a paper contained in Hufeland's Journal, expresses the opinion that bleeding may suppress scarlatina for some time, but does not cure it. He cites the following case in support of his views. A healthy female child, six years old, was seized on the 16th of December 1828, with violent fever, swelling of the neck, pain in the throat, redness of the eyes, frequent vomiting and intense redness of face. A few spots of the same colour were observed on the chest and limbs. In a word, the child presented all the symptoms which announce an attack of scarlatina, which disease was at the time prevailing. Blood-letting to the amount of six ounces was resorted to, and a powder composed of proto-chloride of mercury, (calomel,) and nitrate of potash was administered internally. By these means an immediate stop was put to all the symptoms, the fever abated, the sore throat yielded, and at the end of six days the patient was allowed to leave her bed. Nevertheless she continued to experience uneasiness, her appetite did not return, and the child was peevish and morose, complaining at times of pain in the throat, at others of wandering pains in the limbs. These symptoms continued to manifest themselves until the 12th of January, when all the precursory signs of scarlatina reappeared with increased violence. The eruption broke out all over the body, and was attended with continued delirium. Bleeding and calomel were again had recourse to, leeches were applied to the head, and cold affusions were employed, but all to no avail. The disease became aggravated, and the little patient died on the 17th, being the sixth day since the relapse.—*Archiv. Générales, Juillet* 1830.

32. *On the employment of Galvanism in Hydrophobia.*—M. Pravaz, who is the inventor of an instrument intended to prevent the absorption of viruses in poisoned wounds, and who has proposed to substitute galvanism for cauterization in the treatment of such cases, has read before the Royal Academy of Medicine at Paris (on the 3d of August last) a memoir containing three additional facts in support of his opinion.

1. A bitch was bitten in the thorax by a dog affected with hydrophobia. The wound presented a surface of two square inches. Fifty-four hours after, and when the wound had already become dry, it was submitted for half an hour to the action of a galvanic apparatus of forty small pairs of plates. At first the animal experienced acute pain; but this soon subsided. A few drops of blood issued from the wound, an eschar of one line in thickness was formed, and fell off on the eleventh day. On the 16th the wound had entirely healed. The animal was preserved from hydrophobia.

2. Dr P. inoculated some of the saliva of the same hydrophobic dog in the two thighs of a healthy dog. Fifty-four hours after the wounds were cauterized with the pile; the eschars which formed fell off on the eighth day, the wounds healed on the twelfth, and the animal was preserved from an attack of the disease.

3. A dog was inoculated in the same manner as the preceding one, and with the same saliva. No means being taken to guard against the disease, it soon developed itself, and the dog died of hydrophobia on the tenth day.

From these experiments, M. P. concludes, 1. That since galvanism has operated successfully after a lapse of fifty-four hours, time sufficient is afforded in private practice for procuring a pile. 2. That as electrical currents operate at a distance, it is always useful to submit sinuous and deep wounds to the action of the pile, even after they have been cauterized. 3. That galvanism has, besides, the advantage of destroying, at a considerable depth, by a chemical action, the viruses, and to put a stop to absorption by occasioning a constriction of the capillary vessels.—*Archives Générales de Médecine, August* 1830.

33. *Chronic Dysentery cured by the Blue Pill and a Mucilaginous Diet.*—Dr Bard, of Troy, Vermont, reports in the July number of the Western Journal of the Medical and Physical Sciences, a case of chronic dysentery, cured by the blue pill and a mucilaginous diet—a plan recommended originally by Dr Pierson of Canton, and subsequently in this Journal, and by Dr Mitchell of this city. The patient had been labouring under the disease for three years, with but slight and partial remissions in the winter months. "She was much emaciated; pulse quick and feeble; countenance sallow; skin dry and harsh; tongue slightly furred; appetite very bad, and great debility. There were generally from ten to fifteen dejections daily, slimy and purulent, streaked with blood; and sometimes pure blood was discharged. The abdomen was tender on pressure, with great pain and weakness in the loins, sacrum and hips, and the evacuation of the urine and fæces appeared to be prevented by a peculiar painful sensation of muscular debility, distinct from the tenesmus."

Under those circumstances, the above mentioned plan was adopted, and in a short time proved successful.

We have already expressed our opinion on this practice (Vol. VII. of this Journal, pp. 180, 181). We may now add, without contradicting our former experience, that the mucilaginous diet would alone, in this case, have proved adequate to the cure, without the aid of the blue pill. Similar instances of dysentery, especially among inhabitants of warm regions, have fallen under our notice, and we have seldom, in those cases, found it necessary to resort to any other mode of practice,—aiding it, however, occasionally, by topical bleeding from the anus, or along the course of the descending colon, as well as by tepid baths, and slightly anodyne injections.

34. *On the employment of Rhus Toxicodendron in Paralysis.*—Dr John Eberle relates, in the Western Medical and Physical Journal, July 1830, a case of the successful employment of the *Rhus Toxicodendron*, (poison oak) in paralysis. This remedy, as Dr E. remarks, is by no means a novel, although at

present an almost wholly neglected one. Dufresnay, Kruger, Ely, Alderson, Horsefield and others, have adduced much evidence of its immediate powers in paralysis. Dr E. has himself seen another instance of its usefulness in this affection, and he states on the authority of Professor Osann, of Berlin, that in Germany, this medicine has within the last three or four years been employed with marked success in paralytic affections.

35. *Treatment of Dysmenorrhœa.*—In a short essay on the pathology and treatment of dysmenorrhœa, inserted in the Journal just quoted, the same physician, (Eberle), combats some of the views entertained on the subject by Dr Dewees; maintaining, for example, that the disease sometimes recurs without the formation of a pseudo membrane, and that when the latter is formed, the cause is to be sought for, not in a weak state of the uterus, as believed by Dr Dewees, but in a congested and irritated state of that organ. He regards this disease as frequently of a rheumatic character, stating that the tincture of guaiacum, so warmly recommended by Dr D., is, without doubt, entitled to considerable attention, as a remedial agent in this complaint; but that he has been frequently disappointed with its employment; and finally adds: "the remedy which I place most reliance in, is the extract of stramonium, or the tincture of the seed of this plant. I prescribed it at first, in the presumption of the rheumatic character of the disease, and I have had much reason to be satisfied with its effects."

36. *Case of the Bite of a Rattlesnake,* (*Crotalus durissus*, Linn.)—Dr Richard Harlan, of this city, has sent us the following relation of this case. The extreme danger to which the patient was exposed, in the present instance, and the success of the curative measures resorted to, appear to me to render it worthy of the notice of the profession.

On Monday, the 13th of September 1830, Daniel Steel, a showman of living animals, in this city, was severely bitten by a large male rattlesnake, immediately below and on the metacarpal joint of the index finger of the left hand: the accident occurred about four o'clock, P. M. on a warm day, whilst he incautiously seized the reptile by the neck, not so close to the head but that the animal was able to turn upon him. Immediately after the bite the blood flowed freely from both the fang-punctures: the parts in the immediate vicinity of the punctures became tumid and livid, notwithstanding the efforts of the patient at suction with his mouth—which faintness obliged him soon to relinquish. On my arrival, about half an hour after the accident, I found him extremely pale and faint, and was informed that he had fainted several times: the whole of the back of the hand was puffy and tumid, with infused non-coagulable blood, which appeared to have infiltrated from the vessels, and forced its way through the cellular tissue; a ligature had been previously applied on the wrist; another was now placed on the arm, the fore-arm having already commenced swelling.

The situation of the wound rendered the use of cups inapplicable, and the flow of blood was so rapid as to make their application inexpedient. The punctures were separated some distance from each other, which rendered it requisite to excise two large portions of integument, the incisions extending down to the tendinous fascia; the blood, which flowed freely after the operation, did not appear disposed to coagulate; cold water was now poured on the wounds, in a continued stream, from the mouth of a pitcher, held at a considerable elevation, and the swollen parts in the vicinity of the wounds were forcibly pressed, in order to expel the effused blood. The patient again became very faint, and was laid in a recumbent posture. The wounds were next washed with spirits of hartshorn, several doses of which were administered internally; but being now informed that the patient had drunk freely of sweet oil, the hartshorn was omitted, until the stomach should be evacuated by drinking warm water. A poultice of bread and water was next applied, to encourage the bleeding, and the patient put to bed. At ten P. M. I was sent for in haste; the patient was thought by attendants to be dying. The bleeding from the wounds had been extensive, the tumefaction had extended up to the arm, the inner and inferior portions of which

were discoloured by effused blood: the patient vomited incessantly; he complained of insatiable thirst, and drank cold water every few minutes: he had pain and stricture at the pit of the stomach, great restlessness and anxiety, cold skin, with the exception of the wounded arm, which was very painful: add to which, there existed delirium, singultus, difficulty of breathing, and pulse at the wrist scarcely perceptible. The poultice, bandages, and all ligatures, were immediately removed; the back of the hand was blacker and more swollen, and the skin of the fore-arm was hot and tense. As a substitute for the poultice, and in order to suppress the bleeding, which appeared to endanger the life of the patient by the debility it occasioned, large flat pieces of fresh meat, were bound on the wounds, hand, and fore-arm; before this operation was completed, the patient exclaimed, "that feels comfortable." The indications arising from the present symptoms were: 1st, to allay irritation and thirst; 2d, to arrest the vomiting; 3d, to procure sleep, if possible; and 4th, to excite the sanguineous system to resist the depressing power of the poison, which had so emphatically manifested itself on the system in general.

A mustard plaster was directed to be applied to the pit of the stomach; sixty drops of laudanum to be administered every half hour, until the vomiting be arrested; after which the following bolus, to be taken every two hours until sleep should be induced: R. Pulv. opii, six grains. Pulv. gum. camph. eighteen grains. Pulv. carb. ammonii, thirty grains. M. ft. in three boluses. Sig. as directed. Of these pills he took three before the effects desired were manifested. On the morning of the second day his pulse was raised; the extreme thirst and irritability of the stomach were allayed, and reaction of the system in several respects was manifested, but the tumefaction of the arm had extended to the shoulder, with broad black streaks up to the axilla: stricture at the breast, and great local pain were now the chief complaints. The application of raw meat was renewed, as it afforded comfort to the patient, and appeared to reduce the swelling of the hand, and, by pressure, had nearly suppressed the hemorrhage. In order to allay the pain and tension of the whole arm, he was directed to expose it naked to the *fumes of burnt wool*, in a convenient apparatus; which was attended by such marked alleviation of symptoms, that the patient himself was desirous to have the operation frequently repeated, and continued for two or three days; the swelling always diminishing after each application: it caused the arm to perspire profusely, and covered it with a blackish soot impregnated with ammonia, resulting from the decomposition of the wool. During the intervals, the arm was rubbed with volatile liniment. The raw meat having become offensive from its disposition to ferment and putrefy, was omitted, and flaxseed poultices substituted; the anodyne boluses were continued in half doses through the day, and the quantity increased at night to produce sleep. The system again became depressed, and appeared to struggle with the effects of the poison; as the patient had been somewhat addicted to intemperance, he was allowed milk-punch to support his strength. On the third day, a greater degree of reaction was obvious; the bowels were evacuated by castor oil; the dose of the anodyne was diminished, and by carefully nursing the arm, in less than a week, suppuration suppervened, and the patient was able to leave his bed.

Remarks. In the case above detailed, the resort to suction by the mouth, and the application of cups being prevented by uncontrollable circumstances, and the local and constitutional symptoms being already in some degree developed, there was no alternative but to resort to those general principles of treatment, which, when properly and timely administered, will seldom fail of success; there was no "specific" at hand, nor do I place any confidence in the thousand "infallible remedies" which are offered in such cases. (The reader is referred to a recent number of the Trans. of the Amer. Philos. Soc. for observations on several of these remedies, and a detail of *experiments* with one of the most noted of these specifics, made by the author in 1828.)

Of the many instances of wounds from the bite of the rattlesnake, perhaps not more than one out of ten would prove mortal if left to nature; and perhaps not more than one out of five cases would be followed by *constitutional* symptoms. It has been also satisfactorily ascertained, that of the many hundred men and

animals bitten by rabid animals, not more than one case out of twenty is followed by *hydrophobia:* a fact, in itself, sufficient to account for the origin of the innumerable "specifics" in both the cases under consideration. Nevertheless, several instances of death from the bite of the rattlesnake, in adult men, have unquestionably occurred within my own recollection.

V. MEDICAL JURISPRUDENCE.

37. *A case of Poisoning from Arsenious Acid, which was detected in the Stomach after death.—Communicated for this Journal, by Wilmer Worthington, M.D. of Westchester, Penn.* 1830.

At our November term, of the present year, Edward Williams, a coloured man, was tried and convicted for the murder of his wife, Sarah Williams, by administering to her two drachms of arsenious acid. The following is a brief account of the scientific part of the evidence delivered in the course of the trial, by the physicians, who made a post mortem examination of the body, together with a chemical analysis of the contents of the stomach. Should you deem it worthy a place in your excellent Journal, it is at your disposal.

The deceased, aged about thirty-five years, died suddenly, on the 29th of May last, after taking a white powder in water, which her husband represented as being magnesia. She expired in about four or five hours after swallowing it, complaining of great thirst, intense burning of the stomach, sickness and vomiting of a bloody fluid. She was disinterred about twenty-four hours after interment, and the body examined by several physicians, in the presence of a coroner's inquest. The stomach and duodenum appeared inflamed; the liver, heart, lungs, brain, and uterus were all apparently in a healthy condition. The stomach was carefully removed, after passing a ligature round each extremity, and conveyed to my office; where, on the following day, it was opened, in the presence of Drs Darlington, Thomas, Parrish, Cloud, Brinton, and myself. It contained about ten or twelve ounces of a bloody fluid, which was carefully preserved for examination. The inner coat of the stomach was then washed in rain water, which was also preserved. Extensive inflammation occupied the whole surface of its interior coat; being greatest, however, towards its cardiac extremity. Small whitish particles, resembling a powder, were adhering to portions of its surface, and particularly that part where inflammation was greatest.

Portions of the contents of the stomach were tested with nitrate of silver and sulphate of copper, after boiling with a little salts of tartar, in order to form an arsenite of potash. The former caused a precipitate of a white, cloudy appearance, and the latter, of a bluish green—neither of them presenting the true characteristics of arsenite of silver, or the arsenite of copper.

The remaining portion of the contents of the stomach were evaporated to dryness, and afterwards covered with nitric acid, and again evaporated at a heat below the boiling point. A portion of the residuum thus obtained, was mingled with powdered charcoal, and sublimed in a glass tube. By this means, metallic arsenic was procured in considerable quantity. Several different portions of the contents which had been subjected to the action of the nitric acid, were sublimed in a similar manner, and in every instance metallic arsenic was obtained. By burning it upon heated charcoal, or a red-hot iron, white fumes were given off, accompanied by the alliaceous odour. Professor Hare, to whom we sent a part of the contents of the stomach, also succeeded in procuring metallic arsenic.

I might observe, that several other tests were applied by us, but the only one which rendered in any way a satisfactory result, was the sublimation of the metal. By this means we succeeded in obtaining it in such quantities, as to satisfy us beyond a doubt of its presence. The fluid tests, which were applied previous to the contents being subjected to the action of the nitric acid, probably failed in consequence of the presence of animal or vegetable matter, either of which,

we are told, will destroy the accuracy of their operation. Why the ammoniacal nitrate of silver failed to produce the appropriate precipitate with the arsenious acid obtained by treating the contents with nitric acid, I am unable to say.

Judge Darlington charged the jury upon the three following points: 1. Was the death occasioned by taking arsenic on the 29th of May? 2. Who administered the poison? 3. Was the poison administered by mistake? These questions being sufficiently settled by the evidence, the jury, after withdrawing a short time, returned with a verdict of "*guilty of murder in the first degree.*"

38. *Accusation of Poisoning with Arsenic and contradictory testimony of Medico-Legal Jurists.*—We had intended, but for the pressure of other matters, laying an account of this interesting case before our readers in our last number. The details are given in full in a number of the *Annales d'Hygiène Publique et de Médecine Legale.* The essential features of the case are as follows:

Some suspicion of poisoning having been entertained, it was determined to disinter the subject, who had been a man advanced in life, seventy-five years of age, of a robust constitution, but subject to the asthma, and having a hernia on the right side. He had been, moreover, addicted to the use of ardent spirits, although, in despite of his errors in this respect, he apparently enjoyed good health until the evening before his death. On Friday, the 29th of May, he was suddenly seized with vomiting, to attacks of which, according to the testimony of his daughter and son-in-law, he had been subject. The present one lasted four hours, during which time he threw up a great quantity of matter, the precise nature of which could not be well ascertained by the reporters. On Saturday morning the vomiting ceased, but great prostration gradually succeeded, the breathing became oppressed, and finally death supervened between twelve and one o'clock in the day. The body was buried on the following day, and disinterred on Friday, June 5th. The medical jurists called to superintend the disinterment and make the requisite examinations, report the composition of the coffin, the kind and appearance of the envelopes of the corpse, and on exposing the face, were assured by persons present, that it was that of the person who, it was suspected, had been poisoned. We do not deem it necessary, for the understanding of the case, to repeat, after the reporters, all the peculiarities of the external habit of the body. There was no contusion, wound, or fracture, nor any sign of external violence. The abdomen was slightly meteorized. On opening the skull and incising the membranes of the brain, some sero-sanguinolent fluid escaped, which was regarded as the product of softening of the parts, rather than of any morbid state. The cerebrum and cerebellum were of a natural texture and appearance. The lungs were healthy and without adhesions, as was also the pericardium, which latter contained about two ounces and a half of fluid of a yellowish colour. The heart was empty of blood, some slight indurations were perceptible on its valves and at the beginning of the aorta. By an incision along the neck, the larynx, and pharynx, and fauces were exhibited and found to be clear of any marks of inflammation.

On exposing the contents of the *abdomen*, the mass of intestines, viewed externally, presented no trace of putrefaction or of any notable organic alteration. They were sensibly distended with gas. The inguinal hernia was soon discovered; it consisted of a portion of small intestine, externally of a deep red: the hernial sac was natural and exhibited no signs of strangulation. The stomach seemed to be filled with gas, its external face presented a rosy tint at its great curvature and at the fundus of the organ.

The better to collect the matters presumed to be in the stomach, ligatures were applied around its superior or cardiac extremity, and at its pyloric end. After this it was detached and examined apart. Its cavity was found to contain a small quantity of a fluid of a dirty white colour, in which was suspended some thick mucus, and amounting to about an ounce and a half. The internal membrane was covered with a mucous layer, tolerably thick and opaque. The texture of the membrane was not altered, only a deeply red tint was manifest at its great curvature, corresponding with the rosy colour observed at the external surface. In some places it was somewhat thin. No foreign body was observable in the

cavity. The œsophagus had no signs of inflammation; its internal membrane was of a natural colour.

The internal surface of the intestines showed here and there circumscribed spots of a brownish hue, but without any erosion or disorganization. They were more especially evident in the duodenal portion, in which the colour was still darker. For the most part the mucous membrane displayed a morbid softness, a condition of things particularly observable in the hernial portion of the intestines, and united with a deep red wine colour. No foreign body was seen in the intestinal cavity. The matters which it contained were carefully collected, as in the case of the stomach; they were of a greenish colour and emitted a rather strong odour.

The liver was tolerably voluminous and gorged with blood: it was of a mottled green on its external surface: the gall-bladder contained a small quantity of liquid of a deep green colour. The spleen was gorged with blood; the kidneys and bladder were in a natural condition.

The contents of the stomach and intestines were put, separately, in flasks with ground stoppers, and the stomach itself was put into a jar filled with weak alcohol. The seal of the justice of the place was then placed upon all these vessels, and all were carried to D. to be subjected to suitable processes. Before the examination of the matters thus transported was renewed, the reporters washed the stomach repeatedly in distilled water. By these washings, the internal membrane, having been entirely cleared of all the mucus which lined it, displayed more clearly the red colour at its great curvature. In some places the internal membrane evidently exhibited a morbid thinness, and in others small and nearly circular erosions. It was also easy for the reporters to distinguish on this membrane, chiefly in the parts which were the reddest, many particles of a sulphur yellow colour, of the size of a large pin's point. Examined through a microscope, these small particles, evidently consisting of a foreign matter, appeared to be incrusted as it were in the thickness of the membrane.

By means of a small pair of pincers, two of these particles were taken up; the space which they left was hollow, and resembled ulcerations, the sides of which were also of a yellow colour. These particles, solid and of a shining appearance, broke with the pressure of the forceps in causing a kind of crepitus. Thrown on heated charcoal, they burned with a white vapour, which was perceptibly condensed on the extremity of a glass tube, and which diffused a decided odour of garlic. This was a guide to the steps which we were next to take, say the reporters.

A piece of stomach on which two of the yellow particles were most apparent, having been subjected to a current of sulphuretted hydrogen gas, underwent no alteration, any more than the particles themselves.

A portion of the stomach exposed to the open air, became dry, and the yellow particles were, in consequence, more perceptible and easy of detachment. They presented the same characters as those antecedently mentioned; and two of them having been put on live coal, gave out, as before, a distinct smell of garlic.

Some of the particles boiled with distilled water became white, and imparted to this fluid the property of converting the ammoniuret of copper and the ammoniacal sulphate of copper into green. Following the process adopted by Mr Hume, one of the particles thus whitened by distilled water was, when yet wet, placed on white paper beside a drop of the ammoniacal nitrate of silver, and on joining together the two portions of paper, the white particle became of a pale yellow, with a reddish areola, which on exposure to the light passed to a brown.

A portion of the stomach, thus dried, was scraped with a penknife, in order to separate numerous small yellow particles, which were seen in it, but which, on account of their extreme tenuity and adhesion, could not well be obtained separately. This part having been triturated with potass purified by alcohol, the points seemed to be dissolved, and passed to a brownish yellow. A drop of distilled water added to this mixture gave it a brownish tint, without the membranous part being dissolved. This liquid when decanted appeared of a weak fawn colour; tested with ammoniacal sulphate of copper it became green; the ammoniuret of copper acted more decidedly, and gave a more marked green colour.

Saturated with hydrochloric acid, this liquid was slightly turbid, and deposited cloudy floculi of a pale yellow colour, which were deposited at the bottom of the small capsule. This experiment repeated with liquid ammonia, gave a more decided yellow colour. Owing to the small quantity of these particles, it was impossible for the reporters to treat them with potass in a glass tube, any more than the slight precipitates, which they were unable to collect.

The washings of the stomach. This water, a little turbid, when carefully decanted, left at the bottom of a porcelain cup two yellow portions, having the same character and exhibiting the same changes with reagents as the particles before mentioned.

The decanted fluid produced no change on the ammoniuret of copper, or on the ammoniacal sulphate of copper; it reddened the tincture of turnsol and converted into green the syrup of violets.

Nitrate of silver formed with it a precipitated magma, insoluble in nitric acid; filtered and a drop of the ammoniuret of copper added, it underwent no change; reduced by evaporation to two-thirds and tried by reagents formerly had recourse to, the results were nearly identical; reduced to the consistence of extract and treated with cold alcohol, it became of a coffee coloured brown, leaving at the bottom of the vessel a gummy matter which dissolved in distilled water. This liquid then put on a filter, passed through of a clear coffee colour, and acted with chemical agents as on preceding trials. The alcohol, in which the stomach had been kept, was also treated by the same means as the washings of the stomach, but gave no result.

Mucous matter in the interior of the stomach. The various processes and tests to which this mucus was subjected were not productive of any peculiarities. *The matter collected in the intestines* was of the consistence of syrup and of a reddish olive colour. It separated into two parts by rest, and allowed the deposit of dark particles, and some of a yellow colour, similar to those found on the internal surface of the stomach.

A portion of this matter having been diluted in distilled water, and then poured on a filter, there were deposited on it mucous floculi, in the midst of which could be distinguished through the microscope, and even with the naked eye, numerous small yellow points, having the same external characters as those precedingly observed. The fluid obtained by this filtration was very clear and of a yellowish colour; it reddened tincture of turnsol, converted syrup of violets into green, reddened the starched and ioduretted paper, and finally destroyed its colour.

Subjected to a current of sulphuretted hydrogen gas, it was rendered of a milky colour and became of a dirty white. The ammoniuret of copper, as well as the ammoniacal sulphate of copper, became, on mixing with it, green. One part of the filtered liquor, on being heated, was coagulated and furnished a large quantity of albumen, which was separated by filtration. On being then slowly evaporated until one half had disappeared, the most marked effects were exhibited with the reagents of the salts of copper, which gave a most intense green colour.

In order to remove the yellow colour of the filtered fluid, and fearing that with the addition of the blue, it had been the cause of the green colour, the reporters evaporated a part to the consistence of an extract, in which was introduced a small quantity of nitrate of potass. It was then heated in a crucible into complete calcination. By this means, a powder of a cindery colour was obtained, which, with distilled water, gave a colourless transparent fluid, becoming, on the addition of the salts of copper, of a very sensible green, and agreeable to the eye.

The nitrate of silver produced an abundant precipitate, of a dirty white, insoluble in nitric acid, by which it was rendered of a deeper colour. On separating the muriate of silver by the aid of a filter, the liquid passed through transparent and almost colourless; a drop of ammonia being added, there was formed on its surface a scum of a lemon colour, which finally extended over the whole glass, accompanied by the formation of slight clouds; exposed to light, these

clouds were converted into a brown, but without the colour of the liquid being altered.

As it was impossible to seize on the small particles visible through the microscope, in the matters which remained on the filter, they were dried, in the hope that then the particles could be removed with the same facility as they were from the stomach; but unfortunately, the whole seemed mixed up, and the object of search was no longer visible. The following experiment was then made and repeated three times. A piece of the filter holding the matter, well dried, having been inflamed and plunged into a receiver filled with oxygen gas, burnt in it with a white flame, and furnished a light vapour of the same colour, which was partially condensed into small laminæ with a yellow lustre. The bottom of the receiver contained a small quantity of a straw coloured liquid, which was applied round the sides of the vessel, by means of a tube used to detach the laminæ.

This liquid having been added to the reagents of copper, was changed to a green, as in the preceding experiments. A drop of it placed near a drop of the ammonical nitrate of silver gave a reddish yellow colour.

On summing up these experiments, are we, say the reporters, able to decide on the question, whether or not there was poisoning in this case? "Certainly, if we only have regard to the post mortem alterations, they alone would not furnish us with the means of resolving the question, since these lesions are often found in other circumstances, where there is no poisoning. But the yellow particles found in the stomach, and in the contents of the intestines, merit special attention. Hence, the results furnished by the ammoniacal sulphate of copper, the ammoniuret of copper, the nitrate of silver poured into the liquid, and ammonia added, the action, though feeble, of sulphuretted hydrogen gas, and especially the white vapour accompanied by a sensible smell of garlic, when one of the particles was put on burning coals: all these results *give us ground for believing, without our being able to positively affirm*, that the foreign matter found in the stomach and intestines presents a strong analogy to an *arsenical compound;* that this compound, by its colour, consistence, and crepitus on pressure, seems most to resemble the *yellow sulphuret of arsenic or orpiment.* Now, this compound, like all the others in which arsenic enters, possesses the poisonous property of this dangerous metal, whether it be employed internally or externally; hence, taken into the stomach, it produces alarming effects, and may cause death."

We have been thus minute in describing the various processes had recourse to in this case by the reporters of it, both in order to do them justice on the score of patience and labour, and for the better understanding of a counter report made by MM. Rostan, Hospital Physician, Marc, member of the Council of Health, Orfila, professor of chemistry in the Faculty of Medicine of Paris, and Barruel, chief of the chemical operations of the Faculty. Our readers, after having perused the above details, and followed the critical observations on them and the experiments made by the gentlemen last named, will see all the difficulties of the task of analysis in a question like the present, and will, we venture to say, be better informed on the subject, and better prepared to pursue, if need be, inquiries for themselves, than by studying the most elaborate set essay.

We have not room for the counter report in this number. It is sufficient to say, that it lays great stress, in one of the closing paragraphs, on the propriety and necessity of that capital and convincing experiment being made, which would consist in a reduction of the small yellow particles into metallic arsenic.

VI. MATERIA MEDICA AND PHARMACY.

39. *Ergot possessed of the power of arresting hemorrhages.*—Dr Spaigani has published, in the *Annali Universali di Medicina* for March 1830, a consi-

derable number of cases of hemorrhage, in which he employed the ergot with success. These are noticed in the June number of the *Revue Médicale*, to which we are indebted for our information. The benefit of the remedy is not confined to any one species of hemorrhage. It has been found effectual in uterine hemorrhage, in hæmoptysis, in epistaxis, and in hæmatemesis. Dr Spaigani recommends that it should be given in divided doses, to the amount of at least twenty-four grains in the course of the day. In a girl, twelve years old, affected with hæmoptysis, he increased the dose to the amount of two drachms and a half in the twenty-four hours. The cure was, in some instances, almost immediate; in others, was protracted for several days. The author attributes its efficacy to a depressing counter-stimulant agency; and considers it as exercising this action especially upon the extreme vessels. In accordance with this opinion, he employs it also in sanguineous congestions, and has found it useful in those of the uterus. It appears to us that an explanation, more in accordance with the known action of the medicine in producing uterine contraction, would be, that it occasions contraction also in the capillaries, and thus closes the bleeding orifices.

40. *Polygala Senega.*—Several analyses of the root of this plant have been made by European chemists, which have been published in this country. The latest is by M. Folchi, an Italian professor, who found, among other ingredients in the root, a peculiar acrid principle, in which he believes its virtues to reside. We notice the fact, in order to introduce to our readers the following observations upon this substance, by Dr Folchi, which we find in the *Revue Médicale*, extracted from the *Giornale Arcadico di Roma*, A.D. 1830.

"This matter is in the form of shining plates, of a straw colour. When taken into the mouth, it appears at first insipid, but does not fail, when the saliva is swallowed, to produce in the fauces an acrid or burning sensation, which continues for some time. It does not melt when placed upon platinum strongly heated; but gradually blackens, and in the end is carbonized. It is not sensibly dissolved in distilled water, and is but slightly soluble in cold alcohol; but is readily soluble in this liquid when boiling. A solution of potassa attacks it slightly: liquid ammonia acts more strongly upon it."

We have seen no account of the mode of extracting this principle. The results of the several analyses of the root, which we notice above, may be seen, by referring to a paper on the Polygala Senega, in the July number of the Journal of the Philadelphia College of Pharmacy.

41. *Effects of Colchicum upon the Urinary Secretion, from a paper by Dr Kuhn, contained in the Revue Médicale for July* 1830.—"One of the most remarkable effects of colchicum upon the urinary secretion of persons affected with arthritis or gout, is that which was observed by M. Chelius, and recorded in the *Annales Cliniques* of Heidelberg, Vol. III, p. 345. The professor of Heidelberg has found, that while patients with this complaint make use of colchicum, their urine undergoes changes, which consist in a striking increase of the proportion of uric acid. The following are the results of an examination of the urine of a patient affected with gouty swellings in several of his joints, especially in his knees, so that he was wholly unable to move. Before the employment of colchicum, the uric acid contained in his urine, as well in the free state as combined with ammonia, was 0.069; on the fourth day of the employment of the medicine, it was 0.076; on the eighth day, 0.091; and on the twelfth, 0.112; so that the amount of the acid was almost doubled in a period of twelve days. Similar results were obtained by M. Chelius, in many cases of the same nature, in which the urine was analyzed.

"These results are very important, as they enable us to understand how colchicum produces so many wonderful cures of gout: is it not, in fact, by eliminating from the animal economy, the excess of uric acid, which, in this complaint, forms the chalky concretions of the joints. I well remember having heard M. Lobstein say, long before the publication of the fact observed by M.

Chelius, that he had succeeded in dissipating, by the aid of colchicum, arthritic concretions, which had resulted from inveterate rheumatism."

We agree with the author in considering the fact above related of some importance, but are unwilling to exclude from our explanation of the curative influence of colchicum in gout and rheumatism—the narcotic influence, as well as the revulsive power of that highly valuable medicine.

42. *Chloride of Lime.*—This chemical compound has been employed as a medicine with some success, by the physicians of France, Italy and Germany. Dr Lima of Bergamo, and Dr Gohier of Paris, have found it highly useful in obstinate scrofula; and Dr Græfe, of Berlin, has recently tried it with advantage in gonorrhea. The last mentioned physician prescribes it in the form of an emulsion, composed of a drachm of chloride of lime; seven ounces of almond emulsion, and an ounce of syrup. The dose of this mixture is a tablespoonful, containing about four grains of the chloride, to be repeated every three hours. Three or four portions are usually sufficient to effect a cure. The medicine, at first, usually excites an increased flow of urine, with irritation of the urethra; but these symptoms soon disappear, and the discharge diminishes with them.—*Revue Médicale, July* 1830.

43. *Effects of Medicines upon the System in Health.*—Professor Jœrg, of Leipsic, assisted by a society of twenty-seven members, has undertaken to determine with precision the effects of medicines upon the system in health. Having detailed the effects produced upon different individuals, by different doses of a medicine, he deduces its general mode of action. The following are his conclusions in relation to the substances mentioned.

Water of cherry-laurel. The preparation with which he experimented, was made by distilling three pounds of liquid from a mixture of one pound of the fresh leaves, three ounces of alcohol, and six pounds of water. The effects of the medicine are—an almost immediate excitement of the encephalon and nerves, comparable to that produced by an electrical discharge; pains within the brain, especially about the region of the optic nerves; heaviness of the head and of the whole body, followed by diminution of consciousness, diminution of the pulse, lassitude, disposition to sleep, general weakness, tickling of the larynx, increase of the mucous secretion in the trachea, cough, dryness of the mouth. These effects are more or less intense, according to the peculiarities of individuals: with some, four times as much is requisite as with others, to produce a given result. In small doses, the medicine continues to act only for two, three, or four hours; in large doses, for six, eight, or twelve hours; but the irritation of the larynx, and the increase of mucous secretion in the trachea, last sometimes many days.

Valerian. The infusion was employed in the quantity of four ounces containing six drachms of the root, and the powder in the dose of two drachms in one ounce of fresh water. It moderately excites the cerebral and digestive organs. Its first effect is to render the mind serene, gay, disposed to exertion: at the same time it produces determination to the head, with a sense of weight and pain in this part. By its action upon the alimentary canal, it occasions eructations, a sense of fulness in the stomach, want of appetite, rumbling in the bowels, griping, tenesmus, flatulence, and frequently alvine evacuations rather hard than liquid. These effects are accompanied with nausea, and increase of the biliary secretion. Often, however, it produces not the slightest apparent effect, though administered in large doses. Sometimes it acts only upon the brain, at others only upon the digestive tube. It is more apt to take the former direction when given in infusion; the latter, in the form of powder. Small doses prolong this action for four hours, moderate doses for six hours, and large doses from eight to twelve hours.

Digitalis. From a quarter of a grain to three grains of this medicine was taken in powder, in a spoonful of water, with or without magnesia. It primarily excites the sensitive, digestive, and genito-urinary organs, and secondarily depresses the activity of the circulation, as the following symptoms evince:—in-

toxication, heaviness of head, vertigo, dull pain in the encephalon, increased heat in the face, obscurity of vision, a sense of heat and scratching in the pharynx and œsophagus, extending sometimes to the larynx and trachea, and giving rise to hoarseness, weight and griping in the stomach and bowels, increased or diminished appetite, expulsion of flatus, frequent stools, &c.; increase of urine, which is sometimes clearer than in the healthy state, sometimes of a deeper colour, sometimes natural; erections of the penis, pollutions, sensations analogous to those which precede the appearance of the menses; augmented temperature of the external and internal parts of generation, phlogosis of the same parts, if the doses are too large or too frequently repeated; small or feeble pulse; depression of the activity of the vascular system after the medicine has produced its excitant effects. The decoction, infusion, and tincture of digitalis are less energetic than the powder. The dose is from a quarter of a grain to a grain. Its action is prolonged from twelve to twenty-four, or even forty-eight hours.—*Revue Medicale, July* 1830.

44. *Sinapisms.*—Writers on the materia medica and practice of medicine are apt to overlook matters which they deem familiar to every tyro in the profession; and the student, unable to gain any other knowledge on the subjects with which he is thus supposed to be familiar than what he gleans from casual observation and the incidental conversation of others, is left to adopt inaccurate notions, which subsequent experience is not always sufficient to correct. The subject of mustard plasters is one of those which has not been deemed worthy of accurate investigation, as every one is supposed to be acquainted as if by intuition with so simple a matter. Nevertheless, if the experiments of MM. Troupeau and Blanc, who have inserted an article on sinapisms in the September number of the *Archives Generales*, are to be relied on, even some of the older members of the profession will find that they have something to learn on the subject. We give the results, as stated by these physicians, without entering into a minute account of their experiments, which appear to have been carefully conducted.

1. The flower of black mustard, fresh ground, is not more energetic than that which has been ground for five or six months, and kept wrapped up in paper in a damp cupboard.

2. A sinapism prepared with warm water acts rather more quickly than a sinapism prepared with cold water; but after a few minutes the difference ceases to be discoverable.

3. Mustard mixed with water, acts with much greater energy than when mixed with ordinary vinegar, or with acetic acid much diluted: and even with concentrated acetic acid it acts less energetically than with water alone, although the acetic acid in this state, if applied to the skin by means of a sponge or mixed up with some inert powder, as saw-dust, is a much more powerful irritant than mustard itself, producing much inflammation of the skin in the course of three minutes: so that vinegar mitigates the action of sinapisms, and mustard in its turn diminishes the irritating property of acetic acid. One experiment repeated several times upon different individuals, with the same result in each instance, led to the following conclusion, that good mustard mixed with water produces at the end of six minutes as much pain as the same mustard made into a cataplasm with vinegar at the end of fifty minutes: and sinapisms made with equal parts of water and concentrated acetic acid did not excite the least smarting sensation, though left forty-five minutes in contact with the skin. Instead, therefore, of expecting greater energy from a mustard plaster made with vinegar, we may now direct this addition as a diluent, with the same view that we order rye meal to be added to the sinapism.

But another very singular fact is, that English mustard, such as is used at the table in Paris, was found to act in the same way precisely, whether mixed with water or vinegar. This difference in the result could not have arisen from the use of inactive mustard in the first instance; for the sinapism made with it excited severe pain in the course of ten minutes. Is it possible that the black mustard, which was employed by the experimenters, contains an irritating principle capa-

ble of neutralizing and being neutralized by acetic acid; while another variety, perhaps the white, depends for its activity on a principle having different affinities? This is a question worthy of investigation.

4. Another unexpected result was, that the sinapisms prepared with alcohol were less energetic even than those with vinegar. It will be observed that the authors allude to the pure spirit; as in the ordinary state of distilled spirits, which contains about fifty per cent of water, we know that it forms a very active plaster. The inference is that the irritating principle of the black mustard is insoluble in pure alcohol.

5. Sinapisms, if made with good mustard, can seldom be supported longer than three-quarters of an hour, unless sensibility is diminished by cerebral or nervous disorder; and even then the cataplasm should not be allowed to remain more than an hour in contact with the skin; for though it may be borne many hours, yet if the system react, very severe local inflammation follows, which frequently ends in gangrene, and may even destroy the patient. We can cordially unite in this caution, as we have witnessed very unpleasant effects from sinapisms which were applied to the ankles of a female insensible from the influence of laudanum, and allowed to remain for two or three hours. No immediate effect was produced, but reaction of the system was attended with severe inflammation in the limbs, which terminated in obstinate ulceration.

45. *Salicine.*—We have before given some account of the preparation and febrifuge properties of this substance. At a meeting of the Royal Academy of Sciences of Paris, August 2d, 1830, an extract of a letter from M. Peschier, a skilful chemist of Geneva, was read, giving an account of a more perfect method of extracting the principle, which we shall detail, with the hope that some of our pharmaceutists may put it in practice upon the barks of our own willows, and give the medical profession here an opportunity of testing its virtues. M. Peschier experimented on various species of the willows, with the object of ascertaining from which the salicine might be most cheaply obtained. The salix alba, S. hastata, and S. precox afforded very little that was susceptible of crystallization. The S. monandra, a variety of the S. helix, yielded to M. Peschier two drachms to the pound of dried bark, while M. Leroux obtained an ounce: but the former used the bark of branches scarcely a year old, while that with which the latter operated was three or four years old. M. Peschier found the bark of the salix incana somewhat richer than the preceding; but it yields the salicine with greater difficulty. Upon the whole, it appears that among the willows tried in France, the S. helix is to be preferred. Of the species above mentioned, we believe that the S. alba is the only one which has been introduced into the United States. The Journals state that this is the species from which Fontana and Rigatelli procured their salicine.

The following is the method recommended by M. Peschier. The bark is bruised and boiled in water for an hour or two, and the decoction forcibly expressed. To this the solution of sub-acetate of lead is added as long as it affords any precipitate. The liquor is then filtered, and heated to ebullition, a sufficient quantity of carbonate of lime being added to decompose the excess of acetate of lead, and saturate the acetic acid. After the liquid has become clear, it is decanted from the precipitated matter, which is washed twice or three times; the liquors are then united, filtered, and evaporated to the consistence of an extract. This product, while still hot, is submitted to pressure between leaves of blotting paper; and having thus remained for some hours, is treated with alcohol of 34° Baumè. The alcoholic solution is filtered, distilled so as to give over about one third of the menstruum, and afterwards carefully evaporated. The salicine is obtained in crystals of a pure pearly whiteness.

The physicians of Geneva have administered the salicine obtained by M. Peschier, to many fever patients with the greatest success.—*Archives Générales, Sep.* 1830.

The following chemical account of salicine, by MM. Jules Gay-Lussac and J. Pelouge, is taken from the *Journal de Chémie Médicale* for September 1830. Salicine, when pure, is perfectly white, and is crystallized in the form of prismatic

needles. Its taste is very bitter, and has something of the peculiar flavour of willow bark. It is soluble in about eighteen parts of water, at 57° F., is much more soluble at a higher temperature, and at the boiling point is dissolved by water in all proportions. It is also soluble in alcohol; but ether, or the essential oils, at least that of turpentine, do not take up the smallest proportion of it. Concentrated sulphuric acid turns it of a beautiful red colour, perfectly resembling that of the bi-chromate of potassa. Muriatic and nitric acids dissolve without colouring it. Its solution is not precipitated either by galls, gelatine, acetate or sub-acetate of lead, alum, or tartar emetic. Boiled in excess with lime-water, it does not neutralize the lime, and is incapable of dissolving the oxide of lead. It melts at some degrees above the temperature of boiling water, and assumes the form of a crystalline mass upon cooling. If heated somewhat beyond its point of fusion, it takes a yellow citron colour, and becomes brittle. It consists of carbon, hydrogen, and oxygen.

46. *Bromides of Mercury.*—Experiments have been made with the bromides of mercury, which appear to show that they are closely analogous in their operation on the system to the chlorides. The proto-bromide is found to resemble calomel, from which, however, it differs in more actively stimulating the urinary secretion, and in less readily producing salivation. The deuto-bromide is analogous to corrosive sublimate: but has a more decided effect upon the kidneys and skin, and salivates less quickly. It is therefore preferred in cutaneous eruptions. The author of the experiments, Dr Wernick, physician to an Austrian regiment, gives the deuto-bromide in very minute doses. He considers the ethereal solution as the best form of administration. The proportion employed by him is one grain of the deuto-bromide to a drachm of ether, of which ten, fifteen or twenty drops may be taken every day after dinner, in a little barley water.—*Archives Générales*, August 1830.

47. *Acidulous Phosphate of Quinia.*—Reports on new remedies or new forms of old remedies are to be received with much allowance. Physicians have their favourites, and in presenting them to the public, usually take care to dress them off in the best style. The phosphate of quinia, with a slight excess of acid, appears to be a favourite with M. Harless. He has found it much more easily supported by irritable stomachs than the sulphate, to which it is also preferable in subjects of a nervous temperament, and in those who are liable to sanguineous conjestions or inflammations. It never produces that kind of uneasiness which we sometimes observe to follow the administration of the sulphate; and it has, moreover, the advantage of exciting the heart less powerfully, and of occasioning no irritation of the respiratory organs. As it is but slightly soluble, M. Harless advises that it should be given in the form of powder or of pill, and in the dose of from one to four grains. *Archives Générales*, Aug. 1830, from *Heidelberg Klinische Annal. Vol. V, p.* 565.

48. *Cainca.*—We quote from the *Journal Universel*, June 1830, some facts relative to this medicine, which we have not yet communicated to our readers. According to Dr Francois, the powder of the root has a bitter taste, which is exceedingly disagreeable to the sick. Its dose may be carried as high as two drachms, but it produces variable effects. The aqueous extract, on the contrary, is easily administered, and uniform in its results. It may be prescribed in the quantity of from six to twenty-four grains. In whatever form the medicine is given, its action is essentially purgative and diuretic. It is slow in producing its effects, and must often be continued for a considerable length of time before advantage can be gained from it. Advantage will frequently result from using in the first place a quantity sufficiently large to produce a decided impression, which is to be prolonged by prescribing the medicine afterwards in small doses, three or four times in the twenty-four hours. It is stated as a fact, that the urine is almost always brought by its influence to the natural state, though previously red, thick, acrid, or offensive. It occasions in some persons uneasiness, nausea, and colic, which M. Francois attributes to an irritability peculiar to the individual,

as they have been found to occur after a small dose in patients who have afterwards experienced no inconvenience from a much larger dose; it sometimes also causes vomiting. M. Francois has been very successful with it in the treatment of dropsy, and considers it preferable to all the remedies hitherto employed in this complaint; not from a belief that it is more energetic than colchicum, squill, nitre, digitalis, &c. but because it is exempt from the serious inconveniences of these medicines, while it fulfils the same indication. Often tonic, always purgative and diuretic, it ranks in his estimation at the very head of the medicines calculated for the treatment of ascites or anasarca.

We understand that a portion of the extract has reached this city, so that our physicians have it in their power to put to the test of experiment the information they have received from abroad.

49. *Sulphate of Quinia administered in a new mode.*—Dr J. P. Pointe of Lyons cures intermittents by directing his patients to rub the sulphate of quinia in quantities varying from two to six grains daily or twice a day, upon their gums and the inside of their lips and cheeks. Whether the remedy is absorbed or swallowed, it might be difficult to determine: at any rate, there are few patients in this country who would not prefer a resort to absorption by a blistered surface, to the protracted bitterness of the quinia applied in this way. See a paper by Dr Pointe in the *Journal Universel* for June 1830.

50. *Different kinds of rhubarb distinguished by means of Iodureted Hydriodic Acid.*—According to M. Gregèr, iodureted hydriodic acid gives different colours with the different kinds of rhubarb. It tinges the Russian rhubarb *green*, the Chinese of a *brownish colour*, the English *deep red*, and the French *blue.*—*Journ. de Chimie Medicale*, September 1830.

51. *Analysis of the leaves of the Uva Ursi.*—M. Meissnu has ascertained that one thousand parts of these leaves contain ten of gallic acid, twenty-nine of tannin with a little gallic acid, three hundred and thirty-five of tannin, forty-four of resin, sixty-three of chlorophylle, thirty-three extractive with acidulous malate of lime and traces of muriate of soda, eight of extractive and citrate of lime, one hundred and fifty-seven of gum, one hundred and seventy-six of extractive, ninety-six of lignin, and sixty of water.—*Ibid.*

52. *Volatile Oil of Bitter Almonds.*—It appears from the experiments of Robiquet and Boutron-Charlard: 1. That the volatile oil of bitter almonds does not exist already formed in the fruit, and that water is necessary to its production. 2. That benzoic acid does not pre-exist in the oil, but results from the absorption of oxygen by the oil. Finally, that there exists in the bitter almond, a white, inodorous substance, unalterable in the air, of a bitter taste, soluble in alcohol, crystallizable in radiating needles; for which substance they propose the name of amygdaline.—*Ibid.*

VII. SURGERY.

53. *New Instrument for extirpating Diseased Tonsils.*—The profession is already acquainted with the ingeniously constructed instrument invented by Dr Physick for the excision of the uvula and tonsils. Founded on the apparatus of Brambilla and Heister, which were of small size, and applied solely to the extirpation of the uvula, the instrument of Dr Physick greatly excels them in the solid qualities of more extended and more complete applicability. The double plate, pointed knife, waxed linen bandage, and convenient handle, render it the property of the modifier, who is the *originator* also of its application to the tonsils. In addition to this instrument, Dr Physick devised forceps for the elongation of the tonsils, which are sometimes inaccessible to the knife unless so aided.

Perhaps the substitute for the forceps, delineated in the plate, will not be found unacceptable. This substitute, invented by J. K. Mitchell, M.D. from whom we derive the present notice, consists of a spear A B, formed so as to slide through a socket D, which socket is supported in such a manner as to turn upon a pivot at E. A spring at F tends to elevate the handle, and to keep depressed the point of the spear. A screw at G is used to fix the point, to which the handle of the spear may be depressed, and of course the degree of the possible elevation of the point A.

In fig. 1 is seen the instrument prepared for the commencement of the operation.*

Fig. 2 exhibits it in the second step, the spear having been pressed forward into the tonsil, and the shoulder C having come into contact with the socket D.

The last act of the operation is represented in fig. 3, when the tonsil drawn through the ring by the depression of B and elevation of A, is undergoing abscision by the knife H shown *in transitu.*

The point of the spear is incapable of descending below the plane of the lower plate, so that it cannot endanger the safety of the patient, for it only penetrates the summit of the gland.

The point of the spear may be of any required form, barbed or otherwise. The barb secures the gland better, and assists in extracting it after the abscision.

The socket D, and its support afford a good means of depressing the tongue, so that the surgeon may easily conduct the operation without an assistant.

Some surgeons think it advantageous to put the gland in a state of tension before abscision, deeming the patient thereby better secured from danger of wounding the larger blood-vessels at its base. The tension for such a purpose is done easily by moving the whole instrument in a direction from the tonsil, after the gland has been transfixed and drawn through the ring.

When the gland is so prominent as to pass through the ring without traction, the spear is useful to secure the withdrawal of the part to be cut off, an elevation of a line or two sufficing to keep the spear clear of the knife.

54. We are indebted to Dr W. S. W. Ruschenberger, assistant surgeon United States Navy, for the detail of several cases of disease from the Journal of the U. S. Naval Hospital, Washington City, D. C. The following modest statement of his reasons for publishing these may have a suitable influence on others, to whom we would recommend it.

"Believing that the science of medicine may be viewed at present as a great legal question, with an infinity of clauses, charges and specifications at issue, before a court of inquiry between truth and error, plaintiff and defendant, in which all concerned are bound to give in their testimony without the form of subpœna; I have accordingly selected the following cases (with the permission of the surgeon) from the Journals of the United States Naval Hospital, not doubting but they may be useful on the summing up, to some one of the many points still sub-judice in the great cause."

We regret that it is not in our power to give all the details and even all the cases. We shall select those of most interest.

"*Fistula in ano.* Peter Slayne, admitted March 8th, 1830, ætat. twenty-six. He states that seven months since, on board of the United States ship Guerriere, he was affected with a small abscess which terminated in a fistula in ano. His general health does not appear to have suffered. On examination, the probe cannot be made to enter the fistulous opening more than a half inch.

"24th. Probed a few days since to a greater depth, but without discovering a communication with the intestine.

"April 2d. Passed the probe an inch and a quarter; no communication with the rectum.

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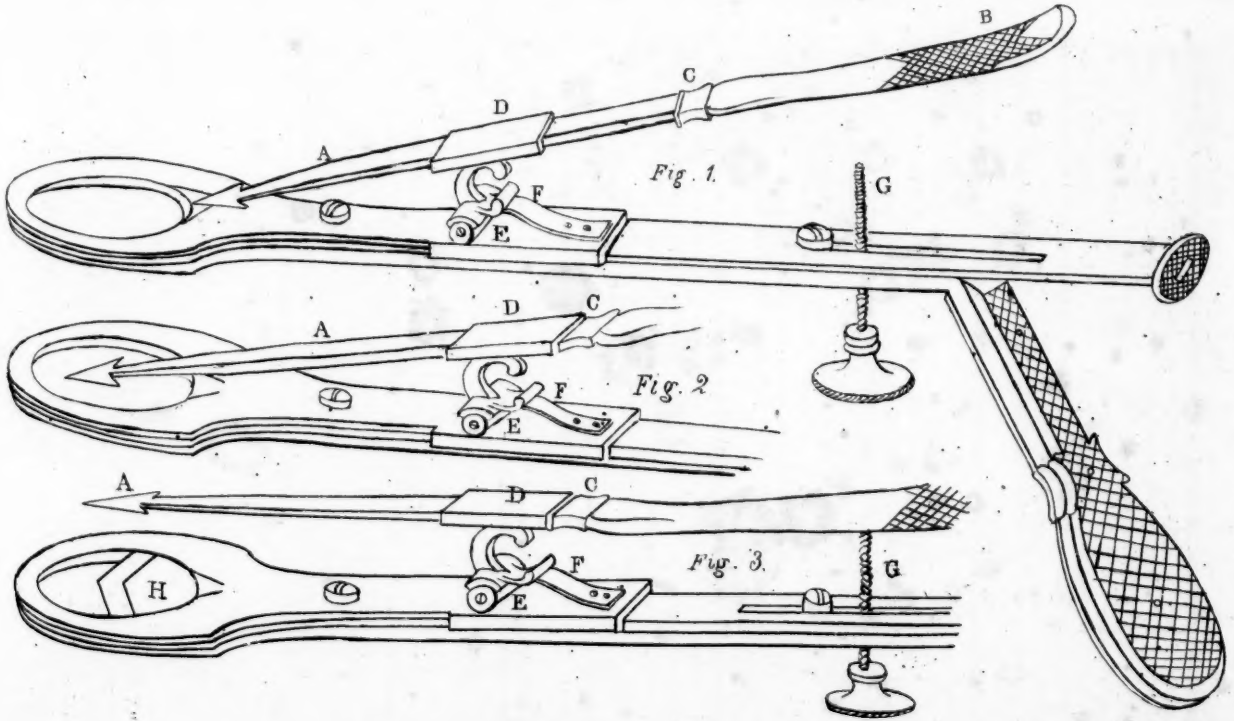
* In the drawing the waxed linen or adhesive plaster bandage has been omitted. It is, however, essential to the completeness of the operation.


B
C
D
A
F
E
G
Fig. 1.
D
C
A
F
E
Fig. 2
A
D
C
F
E
H
Fig. 3.
G

"17th. Has been using, for several days, an injection of solut. acet. zinci, and also the following electuary internally, as prescribed by the surgeon.

R. Pulv. rad. inul. camph. . 1 oz.
Pip. nigr. . . . . 1 oz.
Sem. fœnic. . . . . 3 oz.
Sacc. alb. . . . . 2 oz.
Mel. purif. . . . . 2 oz.

M. ft. Electuar. The size of a nutmeg to be taken twice a day.

R. Acid sulph. . . . . 6 gutt.
Aq. pluvial. . . . . 4 oz.

M. ft. inject. to be used daily.

"May 20th. As yet, little benefit has been derived. Injection changed to the following:

R. Nitrat. argent. . . . 5 grs.
Aq. pluvial. . . . 1 oz.—M.

"23d. The probe passes one inch and a quarter without difficulty. The discharge is small. After injecting the nitras argenti, a small piece of lint imbued with the ung. præcip. rubr. is to be introduced into the orifice, with a view of dilating it, that the remedies may be more certainly addressed to the bottom of the fistula.

"25th. Probe passes into the gut; suspend the treatment.

"June 7th. On examining the part this morning, with the intention of performing the usual operation, the external orifice is closed, and the patient states he has suffered no inconvenience nor observed any discharge for three or four days. To resume the electuary.

"14th. Discharged for duty, having been one hundred and eighteen days in the hospital. About the 1st of July he went to sea, apparently in sound health."

Remarks. Whether this case was cured by the treatment, or "got well," it would be wrong to decide till the plan is proved to be effectual in similar cases. While taking the electuary, he complained of "a burning heat about the anus, which ceased on leaving off the use of the medicine."

"*Stricture of Urethra, and Incontinence of Urine.* Henry Smith, a stout, healthy-looking mulatto man, aged about twenty-five, admitted March 11th, 1830. He states that seven months ago, while labouring under gonorrhœa, he attempted to overcome a severe chordee, by sexual intercourse; that considerable hemorrhage ensued, and a permanent stricture at the end of about three weeks gave rise to his present condition. Since the commencement of his disease, he has been under the necessity of wearing a vessel to receive the urine which constantly dribbles from him. He does not feel the necessity of emptying the bladder. Though many attempts have been made, a bougie, even of the smallest size, has never passed beyond the stricture.

"April 9th. Attention has hitherto been paid to the state of his bowels, which were constipated, and also to the secretion of urine. Passed a bougie, apparently for half an inch, through the stricture, which is situated at six inches from the glans. At night, some irritation, pain in the loins.

R. G. camph. . . . 5 grs.
Spts. vini. . . . Q. s. ft. pulv.
P. G. opii. . . . 1 gr.
M. ft. pill.

Decoct. sem. lini, as a drink.

"24th. The bougie has been introduced frequently, and during the last week daily. It passes an inch further than at the commencement of the treatment.

"May 23d. The bougie has been used on alternate days, and for the last two weeks he has been able to pass his urine in a stream. The stricture is yielding to the treatment. The following unguent has been used, in the form of frictions, daily, to the urethra, near the seat of the stricture.

R. Hydriod. potassæ . 1 scr.
Cerat. simpl. . . 1 oz.—M.

The dribbling still continues.

"June 8th. A full sized bougie is now passed, and a catheter is worn for two or three hours every day. The dribbling is much diminished: he passes his urine in a full stream, and feels occasionally, the 'besoin de pisser.'

"25th. He uses the bougie himself daily, and is improving.

"August 2d. Discharged cured, having been one hundred and forty-four days in the hospital.

"*Remarks.* The instrument used is what is termed the 'cat-gut bougie.' I am convinced from the above case, and another of much longer standing under treatment at the present time, that much may be done by a persevering use of the simple bougie, and perhaps a cure might be effected in every instance—even of the longest standing."

Aneurism of the Arteria Innominata, with diagrams. The details of this case are also given by Dr Ruyschenberger. We have only space to mention, that the patient, Barney Hughes, aged thirty-one, was admitted into the hospital on the 5th of July 1830, with dyspnœa, accompanied by a slow and small pulse: that afterwards, the symptoms indicated the formation and evacuation of vomicæ in the substance of the lungs; and the patient was treated for phthisis pulmonalis; that occasionally great dyspnœa supervened, with symptoms of interrupted circulation; these became more urgent on the 25th of September; deglutition, as well as respiration, were difficult; these symptoms continued, with occasional bloody expectoration, and evident loss of strength. He died on the 13th of October.

"*Post mortem examination*, ten hours after death. Body free from fat; rigid; muscles florid. The lungs did not collapse. The left one free from tubercles, or any marks of disease; floated in water. The right one also healthy, excepting the lower lobe, which was very much congested, and contained several open vomicæ. There were no pleuritic adhesions, nor could an abscess, or the remains of one, be discovered in the chest; there was no fluid effused. An aneurismal tumour of the arteria innominata, with the great veins and nerves running anteriorly, was found extending from the origin of the vessel to within an inch of the thyroid gland, adhering firmly to the trachea, which was nearly surrounded and pressed by it to the left side; it pressed also on the œsophagus, no doubt giving rise to the great difficulty of deglutition complained of by the patient. On opening the tumour, and removing the fibrous coagulum, weighing two and a half ounces, which it contained, an irregular opening, of an inch in length, and half an inch in breadth, was found communicating with the trachea! It appeared to be the effects of ulceration; its edges were irregular, and portions of the cartilaginous rings extended across it. The lining of the trachea was of a dark brick red, as also was the lining of the aorta. There was nothing unusual about the heart: the arch of the aorta was rather larger in diameter than usual. The blood in the veins fluid, and of a very dark colour. This state of things I have endeavoured to represent by the accompanying diagrams.

EXPLANATION OF THE DIAGRAMS.

FIG. 1. *Front view.*—1. The trachea. 2. Right carotid. 3. Right subclavian. 4. The aneurismal tumour. 5. Right bronchium. 6. Pulmonary artery. 7. Right auricle. 8. The aorta. 9. Left subclavian. 10. Left carotid. 11. Innominata.

FIG. 2. *Back view.*—1. Trachea. 2. Aneurismal tumour. 3. Left bronchium. 4. Right bronchium. 5. Arota.

FIG. 3.—1. The trachea. 2. Cavity of the tumour. 3. Opening into the trachea with the cartilaginous rings extending across it. 4. The tumour.

FIG. 4.—1. View of the opening from the inside of the trachea.

"On opening the abdomen, the stomach and intestines were found distended with air, and the latter slightly injected, containing portions of fœcal matter. The stomach contained about a gill of fluid,—probably the drink he had taken. The liver was somewhat enlarged, and of a light colour—the gall bladder contained about half an ounce of healthy bile. Spleen bluish, contracted and firm. Bladder empty. Head not examined.

Fig. 1.

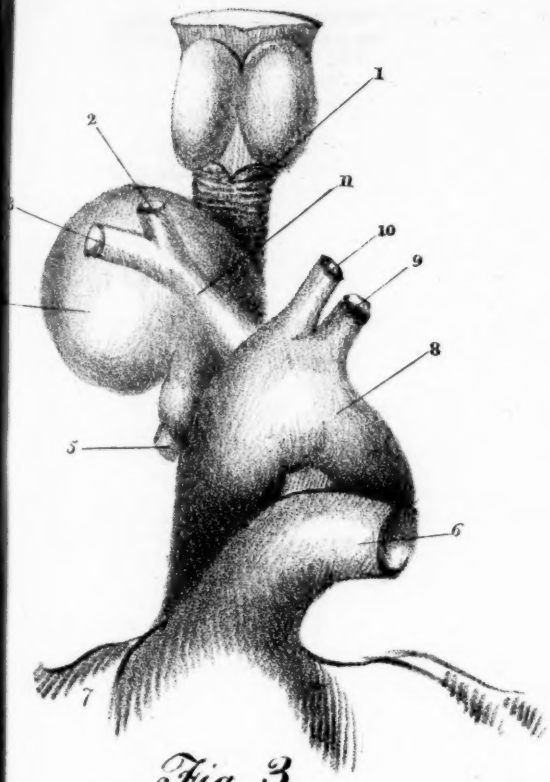


Fig. 2.

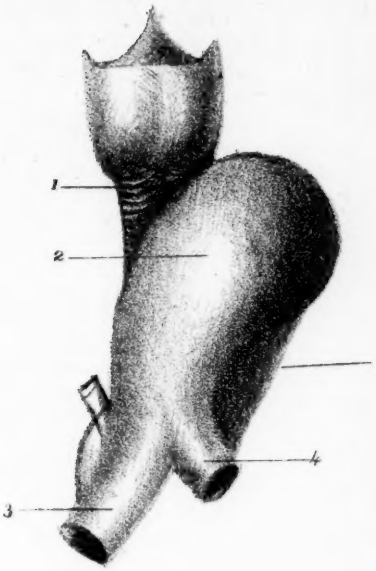


Fig. 3.

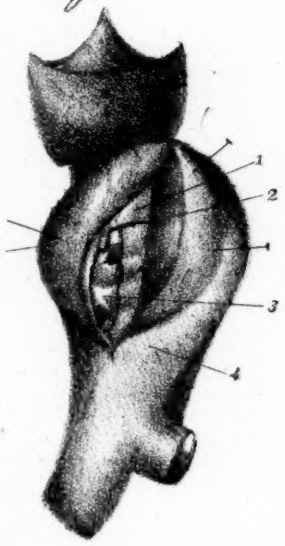
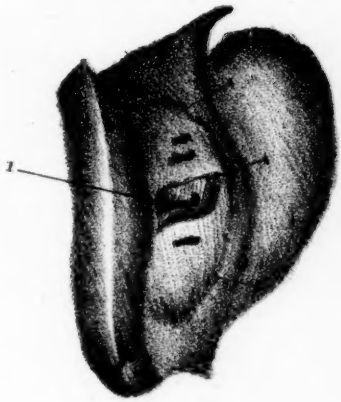


Fig 4



"*Remarks.* He stated to his attendants, that he was confident of the existence of a tumour in his neck, but never complained of its pulsating, nor was he affected by exercise. He attributed his disease to sleeping on the ground while "working on the canal," and said, that his physician told him he had the "asthma." He had been bled, and had taken expectorants. He was discharged from the U. S. Ship Brandywine in October 1829, having been on board of that vessel more than three years, and had suffered, occasionally, from hepatic derangement, while in the Pacific. He was rather intemperate in the use of spirits. He was born in Ireland."

55. *Fracture of the Cranium, accompanied with loss of Brain and Hernia Cerebri; successfully treated.*—By Joseph K. Swift, M.D. of Easton, Penns. "On the 16th of December 1825, I was called to Jacob Sherrer, of this neighbourhood, who was thrown from his horse while in a state of partial intoxication, although his general habits were those of sobriety and industry. He had fallen against the sharp angle of a large stone, and received a fracture of the parietal bone, commencing about its middle, and extending downwards to the squamous suture, upwards to the sagittal suture, and backwards to the os occipitis, or very near to it. The wound of the scalp was between six and seven inches in length. About two square inches of the parietal bone were comminuted and driven through the dura mater into the substance of the brain: some of the fragments of bone were visible; but most of them were hidden in the brain, being forced edgeways into it; one piece in particular, nearly an inch in diameter, was covered to half an inch in depth, and so completely concealed, that I did not discover it until all the other fragments had been removed. I placed the pieces together, and finding that they would not fit, concluded that there must be a portion remaining, and found it with a probe. All the pieces so removed were entirely separated from the integuments.

"Three other fragments, equal to two square inches, near the occipital bone, were turned at a right angle, directly into the substance of the brain, but these were not entirely separated from the scalp, although the dura mater and other membranes were lacerated. I elevated these portions of bone to their natural level.

"A surface of brain was thus exposed, from three to four inches square, in several places penetrated by fragments of bone to the depth of more than an inch, denuded completely, and lacerated by fragments of various sizes.

"After carefully removing these fragments, I separated nearly a tablespoonful of brain, which was lying loose upon the wounded surface; besides which, a small quantity of brain was observed upon the stone where the accident occurred, but how much I did not ascertain.

"A spicula of bone had penetrated the longitudinal sinus, from which a considerable quantity of blood had escaped previous to my arrival; it was then readily commanded by a dossil of lint. The left side was paralyzed, the injury being on the right.

"I drew the integuments together, and confined them by a couple of stitches, one at the upper and another at the lower angle of the wound, leaving a disunited space in the middle of about two inches. A light flaxseed poultice was directed to be placed over the wound; the patient's head to be kept greatly elevated, and cold applications to be applied, excepting to the part occupied by the poultice. I bled him three pints, gave a dose of cream of tartar and jalap. Diet: bread and water. Room to be kept dark, and absolute quiet enjoined.

"During the bleeding he vomited freely, and fainted twice. Notwithstanding the extent of injury which the brain had sustained, he retained almost entire possession of his senses; his feelings were excited, and his memory somewhat affected, with an increased disposition to talk, but volition was not impaired. During the time I was operating on and dressing his head, he answered all questions in a rational manner; knew by the sensation when I removed a piece of bone, and conversed much with his wife and children.

"On the following morning the dressings were removed; numerous portions

of brain adhered to them, perhaps a teaspoonful. A serous fluid was discharging. Bled him three pints.

"In the evening, discharge of serum, mixed with blood. Bled him one quart.

"About the third day from the receipt of the injury, a portion of brain, equal in size to a common walnut, protruded from the integuments, by which it was considerably constricted at its base. Good pus was discharged in small quantity, and the tumour sloughed off in the course of three or four days, and was succeeded by two or three others of smaller size, which underwent the same process. For several subsequent weeks there was a copious secretion of healthy pus; and to be brief, the patient recovered without a single unpleasant symptom, to the utter astonishment of myself and of all who saw him.

"The indications I pursued throughout this case were, the most rigid adherence to the antiphlogistic regimen; an upright position of the head; the constant use of cold applications; absolute rest and quiet, and a careful preclusion of every exciting cause. Venesection was pushed to such an extent as to keep the pulse constantly below the fever point; whenever it evinced an increase of action I bled him, mostly *ad deliquium*: the bowels were slightly constipated, rendering purgatives occasionally necessary.

"The paralysis had much abated before the cicatrization of the wound, and the slight disturbance of his mental faculties also subsided.

"Nine months have now elapsed since the occurrence of the accident, and the patient, a farmer, is able to attend to his business. His left side is still weaker than his right, although its use is completely restored. In August last, I called him into my office to show his head to my friend Mr Franklin Peale, and in answer to the many inquiries we made him, he stated that he thought his faculties better than they were before his injury; that he could calculate with more facility, and that previously to the accident, he was subject to a very severe periodical headach, to which he is now a stranger.

"The motion of the brain is distinctly visible through the integuments, and the vacuity from loss of brain and bone would contain rather more than half a gill of fluid.

"May not the extent of laceration of the dura mater have been favourable to the fortunate issue of the case, by allowing a free discharge of pus and extravasated fluids, and consequently removing all pressure from the brain? At all events the case decidedly proves, that injuries of the brain, with loss of its substance, and consequent laceration of the membranes, are not necessarily mortal.

"March 21, 1826. The patient continues well, and experiences little or no difficulty in attending to his ordinary duties. The left arm is still not so strong as the right, and its motion not quite so free, but it is progressively recovering.

"My friend Dr Cooper, of Easton, attended the patient with me after the second or third day of the accident."

Note. By Samuel George Morton, M.D., one of the physicians to the Philadelphia Almshouse Infirmary.

"Happening to be at Easton during the present month, (July 1830,) Dr Swift politely took me to see the individual whose case is recorded in the preceding communication. Four years and a half have now elapsed since the accident occurred, and the subject of it remains precisely in the situation described by Dr Swift: he assured me of his increased facility in making calculations, and of the entire absence of headach, which had greatly afflicted him prior to the receipt of the injury. He is of a robust frame, and can at present endure as much hardship as at any former period of his life. No paralytic symptoms remain.

"The cavity in his head remains as great as ever, but the integuments have became much thickened, and the pulsation of the brain, though obscure, is still evident to the touch."

56. *Rupture of the Intestine Jejunum.*—The following case has been politely furnished by Dr J. M. Kollock in a letter to Dr Wood, dated Savannah, Sept. 30th, 1830. "April 10th, 1830, I was called to visit a negro man at a plantation about three miles from the city, height six feet, age forty. Was informed that

on the preceding evening, he was thrown from a cart on a stump, which struck him on some part of the abdomen. Very great pain was the consequence, which continued to an excruciating degree all night. I found him lying on his back groaning, his feet drawn up, belly very much swollen and externally tender to the touch. When inquiry was made as to the seat of pain, he placed his hand just above the pubes. A tumour was observed, on examination, a little below the right abdominal ring, whose elastic feel, tenderness, together with the symptoms of vomiting, cold extremities, hiccup, tumid and painful abdomen, furnished just reason to suspect strangulated hernia. Under this impression, I directed him to be placed in the warm bath, until my return to and from the city, with instruments and assistance, in case of the necessity of an operation. I carried out a medical friend with me, prepared as we supposed to meet the indications of the case. The employment of the toxis, after being subjected to the bath about half an hour, was successful, apparently, in reducing the intestine; some tumour, however, still continued. In a few minutes he had several free pasages, the effects (as we supposed) of a dose of salts which had been given previous to our seeing him; after some of these operations he nearly fainted, but on moving felt easier and was disposed to sleep. The relief from pain, together with the freedom of his evacuations, induced the belief that whatever strangulation had occurred, was now relieved, although there still continued considerable tumour in the upper part of the scrotum, which always disappeared on pressure, and returned when it was discontinued. Its disappearance was not attended with the sensation usually produced by intestine retreating into the abdominal cavity, but was like that of a fluid squeezed from a sack. Although we could not satisfactorily account for this circumstance, we determined to pursue the treatment for peritoneal inflammation, as indicated by other symptoms. He was accordingly bled, and a large blister ordered for the abdomen. We were preparing to return to the city, with the intention of visiting him in the evening, when the nurse came to me with the information that he had again fainted. I returned to him, and found that he had fainted in an attempt to rise to stool. He was lifted into bed, and the usual means resorted to for his restoration. He continued to gasp for a minute or two, and breathed his last.

"Our impressions from the circumstances were, that a fatal deliquium had been induced by the profuseness of his evacuations, and his exertion in rising to stool.

"*Autopsia*, three or four hours post mortem. Before proceeding to an examination of the abdominal cavity, I cut down upon the hernial tumour in the usual manner for the relief of strangulation. After dissecting through a number of layers of fascia, I came to what appeared to be a sack: on making a very small cut into it, a fluid of a bilious appearance and smell spouted out in a continuous stream without having the effect of reducing the tumour. Being uncertain as to the nature of what I had cut into, I left it and proceeded to an examination of the abdominal contents. The first stroke of the knife into the peritoneal cavity gave vent to a torrent of the same fluid which had gushed from the scrotal tumour, mixed with portions of coagulated lymph. Further dissection exhibited a most intense degree of inflammation of the whole cavity; the intestines agglutinated to each other; coagulating lymph of a purulent appearance thrown out in every direction. Turning over the intestines, a hole large enough to admit the end of the index finger was discovered in the jejunum, two or three feet from the stomach, and near the junction of the intestine with the mesentery. A worm of the lumbricus species had made its way through the hole and was discovered in the cavity of the peritoneum. The stomach contained a quantity of yellow bilious fluid, and stercoraceous matter. The gall-bladder was full. The liver exhibited a pale appearance. The abdominal ring was free from intestine, consequently the tumour in the scrotum was a sack, filled with the fluid which the abdomen contained. The violent peritoneal inflammation was no doubt, in a great measure, occasioned by the effusion of the intestinal contents.

"Our conclusion from these appearances was, that a rupture of the intestine was occasioned by the blow from the stump on which he had fallen on the evening previous to my seeing him, and that the intense abdominal inflammation was the immediate cause of his death. An examination of the section of

intestine, in which the rupture occurred, induced me to believe that there existed disease of the part previously, for the opening had the appearance somewhat of ulceration, and the whole circumference of the gut at that place exhibited an unnatural aspect. Had this been the immediate effect of a blow on a sound intestine, I should have expected a rather different state of the part; and it is probable there would have remained some external marks of violence on the abdominal muscles, *of which no traces could be found.*

"Dr Waring (whom you know by reputation at least) was of opinion, on examining the section of intestine on which the violence was committed, that the hole which was discovered was the " result of sphacelation, caused by the blow which was received at the time of the fall, and that the rupture occurred some time between the receipt of the injury and the death of the patient; that ulceration would have exhibited thickening of the parts, and appearances of chronic disease; but here was a bruise, attended with extravasation of blood between the coats of the intestine. He was also of opinion that much of the inflammation of the peritoneal surface of the viscera was occasioned by the violence of the blow."

57. *Aneurism of the Aorta, rupture of.*—We are also indebted to Dr Kollock for the following case:

" The subject of this case was a negro woman, at a plantation nine miles from the city, aged about seventy. She had, for a length of time, been subject to difficulty of breathing, almost total loss of voice, pain in the chest, cough, and sometimes bloody expectoration. Some weeks previous to her death, which occurred August 8th, 1830, I was called to her, and was informed that she had suddenly fallen down, to all appearance dead. She had recovered her senses, however, when I saw her, and was breathing with very great difficulty, and expectorating blood. I bled her freely, which was attended with relief. Having many of the symptoms of hydrothorax, together with dropsical effusions in other parts, I put her upon the treatment accordingly, viz. calomel and squill, perpetual blister to chest, &c. by which she was much relieved, and continued better until the above date, when she fell while walking, and immediately there was a gush of blood from the mouth which terminated her existence.

" *Autopsia*, twenty-four hours post mortem. Body supine. The sternum being raised, the pericardium was found distended; left lung collapsed, adhesions between it and the ribs; pericardium contained fluid; heart a little enlarged. On tracing the aorta from the heart, just beyond its arch and the origin of the arteries of the superior parts, a large tumour was felt, like a second heart. This adhered to the left lung and trachea. Dissecting them out, and separating the adhesion, a rupture of the artery was discovered, through which the blood had been effused into the cells of the lung, to which the aneurismal tumour had adhered. The sac was filled with coagulated lymph. The coats of the artery were much diseased, and thin at the place of rupture. The internal face of the sac had the appearance of cells, or holes, in the inner coat. These places appeared to have been sometimes the seat of rupture; and it is probable that a partial rupture of this kind took place at the period of the first hæmoptoe. The coagulated lymph filled two-thirds of the cavity of the sac, and was firm and spongy, and not adherent to the sides of the artery. Coagulated blood was found behind the œsophagus, as high as the larynx. The arteria innominata was much enlarged, and its coats thickened."

58. *Mrs Denmark's Case.*—Our readers will remember, that this case was the first in which an attempt was made by Mr Wardrop to cure an aneurism of the arteria innominata, by tying the carotid or subclavian artery, or both these branches. By reference to Vol. V, p. 227, [*where, for* Mrs A. *read* Mrs D.] and page 466; Vol. VI, p. 191; and Vol. VIII, p. 427, of this Journal, information respecting the history of this case, and the opinions and hypothesis of different surgeons as to its nature and the propriety of the operation, will be found.

In the Lancet of September 9, 1828, (the operation was performed on the 6th

of July 1827,) Mr Wardrop reports, that on the 8th of August 1828, the patient was more emaciated, in consequence of an attack of bronchitis; but her appetite has returned; the difficulty of respiration has greatly diminished, so that she can sleep in a natural position, and is entirely free from the dreadful sense of threatening suffocation. "No tumour susceptible in the situation of the aneurism, but an unnatural feeling of hardness can be perceived at the root of the neck, immediately above the sternum, arising, no doubt, from a condensation of the aneurismal tumour. The right carotid still pulsates, although not so strongly as the left; its pulsation corresponds with the heart, but its temporal branch affords no indication of the circulation of blood; the right radial artery beats with about half the strength of the left." The patient was free from her former pains in the neck, shoulders and back, and could take daily exercise in the open air.

Under these circumstances the aneurismal disease was considered as cured. In about three months, however, a tumour appeared at the upper edge of the sternum, and, as it advanced, covered the inferior portion of the trachea. Some months afterwards, a second tumour appeared near the root of the right carotid, and extended up on the right side of the neck. The two tumours were so intermingled at their base, with the firm, consolidated remains of the old aneurism, that their limits could not be ascertained.

Mr Wardrop maintaining his former opinion, that the arteria innominata was the seat of the disease, proposed tying the right carotid artery: the former operation of tying the subclavian having been undertaken on the supposition that the right carotid was obliterated; it having ceased to pulsate. A consultation, however, discouraged the operation.

The aneurism increased, anasarca and dyspnœa followed, and eventually, a diarrhœa, by which the patient was exhausted, and died on Friday the 13th of (September?) 1829.

Dissection. The tumour was not diminished in size; it occupied the space between the two sterno-mastoid muscles, and above was divided into three lobes, formed of the original portion of the aneurism, and the two recent tumours. It was larger than a turkey's egg, and had produced some absorption of the sternum. The tumour felt firm, and in laying it open, appeared nearly solid, the clavicular and tracheal portions being filled with firm coagula, and the cavity of the aneurism being limited to the division between the sternal and tracheal portions. It was about the size of a walnut. The parietes of the heart were thinner and softer than natural, but no other change observable in this organ. The only change in the aorta was, that the coats were preternaturally yellow, rather thicker, and had a few points of ossification. The size of the vessel was natural. On cutting open the innominata from the aorta, the aneurism was found to have extended from its origin to its bifurcation. The subclavian artery was obliterated, where the ligature had been applied. The right carotid was pervious, and quite healthy. The lungs were healthy, excepting a preternatural redness of the mucous membrane of the bronchiæ.

Mr Wardrop observes, that the dissection shows, first, the correctness of the diagnosis; second, that the principles laid down by him admit of successful practical application; and third, that the current of blood through the carotid, will be sufficiently strong to extend the walls of the tumour in the direction of that current, to whatsoever degree the progress of the aneurismal swelling may have been arrested by the closure of the subclavian.

Our readers are thus at last furnished with the issue of this most interesting case, and we cannot but reiterate our approbation of the general principles laid down by Mr Wardrop, and our belief that in suitable cases they will be practically useful. The case of Mr Evans (Vol. VIII. p. 215 of this Journal) and this case of Mrs Denmark would prove *that a ligature beyond the tumour will answer even in those cases where large vessels are given off at the tumour or between it and the ligatures.* This has been admitted. As above observed by Mr Wardrop, it is evidently required for an aneurism of the innominata, that both the large vessels, the carotid and subclavian, must be obliterated for a permanent cure: but it is equally evident, as far as the above operations go, that a cure may be accomplished, although such vessels as the internal mammary, vertebral, thyroi-

deal, &c. &c. remain pervious. If subsequent experience should confirm these facts, the operation of Brasdor will be more extensively useful than has hitherto been imagined.

59. *Radical cure of Hernia.*—M. Belmas has submitted to the French Institute, a memoir detailing the circumstances which led him to the discovery of a radical cure of hernia, and the experiments which demonstrate its truth. This will hereafter be published. The Journal Des Progrés, vol. 3, 1830, presents the following summary of his investigations.

"An intestinal hernia, when once reduced, leaves a passage, continually open for a new displacement; the viscera readily glide along a canal always lubricated and formed of the hernial sac. All attempts, hitherto made, to obliterate the neck of this sac have failed, and been always dangerous. To effect a radical cure, an adhesion, as in the case of hydrocele, must be effected between the opposing surfaces of the cavity and a consequent obliteration of the sac. But this result cannot here be obtained with near the same facility as in the tunica vaginalis; for irritating injections, emetics, &c. do not confine their influence to the sac itself but extend to the abdomen, causing dangerous peritonitis. M. Belmas asserts, that, if a bag of gold beater's skin filled with air, be introduced into the abdominal cavity of a dog, it excites, around it, but merely to an extent corresponding with its size, an inflammatory irritation, followed by a lymphatic deposition, an absorption of air and also of the bag itself; so that at the expiration of some days, a concrete albuminous mass can alone be found, and after some weeks, only a fibrous knot remains. Similar experiments, made by M. Belmas on the hernial sac of dogs, have been followed with the same result as in the abdominal cavity. Filled with the distended bag, the sac inflames through all its extent, and is obliterated in a few days, in the manner above mentioned, without preserving any remains of the foreign body introduced. Of thirty female dogs affected with hernia, which have thus been operated on, in spite of the indocility of these animals, thirteen have been radically cured. M. Belmas operates in the following manner. A small bag of gold beater's skin, perfectly empty, is connected with a tube furnished with a stop cock. A small incision is made with a short and narrow bistoury at the most inferior part of the hernial sac, the edges of which are drawn asunder, and there is introduced into the sac a cannula and stilette, to the extremity of which the tube of the bag is fitted. The point of the cannula is pushed, with suitable precautions, to the superior part of the sac, near the neck. The stilette is then protruded, and through the opening which it makes in the skin, the cannula and the tube of the bag are to be drawn out. To this tube is to be attached that of another bag filled with air; the stop cock of the first is to be opened, and a sufficient quantity of air is injected into the bag of gold beater's skin and there retained by closing the cock.

The operation has already been practised on one patient, and with complete success, notwithstanding unfavourable circumstances, such as the advanced age of the patient, his cachectic constitution, a paralysis of the bladder and a chronic catarrh. Much swelling succeeded on the second day, and M. Belmas dreaded some unpleasant consequences, but none occurred. For two months and a half there has been no return of the hernia, although the patient is the subject of an habitual cough. This man has been presented at the clinique of the Hotel Dieu. It should be remarked that the bag should be introduced in a dry state into the sac. M. Belmas who at first thought it most convenient to cover it with oil, discovered that this alone was sufficient to prevent its absorption."

The ideas above suggested are new and may be useful, being founded on the fact that animal substances will be dissolved and absorbed by living tissues, as has been long known respecting animal ligatures. The objections to the above plan which strike us, are that continuous inflammation of serous membranes occurs much more rapidly in the human subject than in the lower animals, especially when the system is exhausted and irritable; hence the danger of peritonitis is not fully prevented: and secondly, we doubt whether simple adhesions, without contraction of the tendinous aperture, will be adequate for the permanent and radical cure of hernia.

60. *Excision of a Carious Rib.*—Louis Everard, says the *Jour. des Progrés*, vol. 3, 1830, was admitted on the 23d of March, into La Charité, with a fistulous ulcer of long standing over the sixth rib on the right side, which evidently communicated with an abscess in the course of the rib. The patient was much emaciated, had a severe cough and a thick mucous expectoration in no degree purulent, thus differing materially from the discharge from the fistula, and manifesting that no communication existed between the surface of the bronchiæ and the abscess about the rib. M. Roux excised four inches of the fifth rib, (being the whole of the apparent diseased portion,) on the 24th of April, without opening the cavity of the pleura. The abscess had evidently no communication with the internal tissues. At the first dressing, every thing appeared well, but on the third day, pleuritic symptoms ensued and the patient soon perished. On a post mortem examination the lungs were found partially adherent on the right side, and there was a considerable effusion on the same side into the cavity of the pleura of a sero-purulent fluid with flakes of lymph. Tubercles of the lungs existed, and also a caries of the internal surfaces of the second, third and fourth ribs.

61. *Laryngotomy in Trismus Nascentium.*—In the American Journal, No. 13, Dr. John Billinger, of Charleston, S. C. relates a case of Trismus, occurring two weeks after birth. Remedial measures were ineffectual and death seemed fast approaching—"the child could neither suck nor swallow; the muscles of the throat were rigid, and the larynx fixed; spasms of the muscles of the neck, chest, abdomen and back recurred (by experiment with a pulse-glass) every half minute. During these paroxysms, the veins of the neck and scalp became turgid, and the eyes seemed ready to start from their sockets. Respiration was performed with much difficulty; and in inspiring, the air produced a whistling sound. The pulse was small and fluttering. Dr. B. proposed opening the windpipe, and laryngotomy was performed between 10 and 11 o'clock, P. M. June 23, 1830, in the presence of Dr H. C. Glover. On puncturing the crico-thyroid membrane, air instantly rushed up through the opening, bubbling up the blood, which was also, in a few seconds, frothed out of the mouth. The hemorrhage was arterial and considerable for an infant of this age. A remarkable change occurred in the most prominent symptoms—the strong and frequent spasms were no longer observed; the convulsions which existed during the operation ceased, and the child lay motionless and seemingly inanimate: the pulse however was regular, and slower and stronger than before the operation. The child had a quiet night—spasms returning but two or three times. The quill introduced into the opening of the larynx had fallen out; respiration however was free and tranquil. The child took some gruel. Next day there were symptoms of laryngitis, which were subdued by means of calomel, oil, and antimony, assisted by blisters. The child eat heartily, and in a few days was decidedly convalescent.

The infant afterwards suffered from prolapsus ani, inguinal hernia, and subsequently from disordered bowels. Dr B. was requested to visit it on the 23d of June, one month after the operation. The child died the following night, exhausted by the intestinal irritation.

Dr B. has since resorted to this operation in the last stage of trismus nascentium; but too late, as no advantage resulted, and the patient died in some hours. He would recommend it not only in these cases, but also in hydrophobia, as he believes that death results from an interruption of the respiration by spasms of the glottis.

62. *Strangulated Hernia.*—In the *Transactions Medicales*, &c. by M. Gendrin, for July 1830, an account is summarily given of five operations by M. Sanson, for strangulated hernia, attended by peculiar and important circumstances. In *two cases*, the hernia had been reduced by the patients, but the symptoms of strangulation continued, and a tumour could be felt, through the walls of the abdomen, situated above the ring. M. Sanson operated by exposing the abdominal ring, seizing the tumour in the abdomen, again drawing it out, and then dividing the stricture formed by the neck of the sac. The success was complete.

In a *third case* a man was brought to the Hotel Dieu, in a dying condition; a strangulated hernia was reduced, and the symptoms continued, but no signs of the tumour could be discovered by careful examination of the abdomen. On this account, and also because the patient was so nearly exhausted, no surgical measures were attempted. Death occurred soon afterwards. On examination post mortem, a strangulated hernia in its sac was found situated behind the pubis and above the bladder, which will account for its not being felt.

A *fourth case* is interesting, as exhibiting, says M. Sanson, the caution demanded when the seat of the strangulated gut cannot be ascertained. An individual was suffering from all the symptoms of an internal strangulated hernia; and had long been subject to an inguinal hernia, which was now reduced, but which had always been reducible and never strangulated. Palliative measures were altogether ineffectual. "A consultation of surgeons was held, a majority of which decided that nothing should be attempted. The state of the patient did not improve, stercoraceous vomiting continued, the strength declined, and no relief was experienced. A celebrated surgeon, seeing the state of the patient and the unequivocal signs of strangulation, proposed an operation, and thought it should be performed in the absence of all sensible signs of the existence of a strangulated tumour, either in the inguinal canal or in the abdomen near the ring. The operation was resolved on. M. Sanson retired to make the necessary preparations. At his return, every thing being prepared, and at the moment of operating, perceiving neither tumour nor pain, nor tension of any kind above the ring, and remarking that the portion of the belly which corresponded to the hernia was the only part which was not painful nor tense, M. Sanson refused. Then, examining the abdomen with all the care which he had already exercised in his former reiterated researches, he perceived on the left side, and very deep, an evident, although an obscure tumour of a cylindrical form, which he immediately regarded as the colon filled with fæces." An examination per rectum was resisted by a contraction near the sphincter, and difficulty was also experienced in attempting to introduce a gum elastic tube. Injections of oil were frequently administered with force, and some yellowish and soft fæces were brought away. M. Sanson then determined on the employment of a cathartic, but as the vomiting continued, vesication was excited on the thigh, and a drop of croton oil applied to the denuded cutis. An abundant evacuation followed; the vomiting ceased; the patient discharged, in three or four days, many pounds of soft and yellowish fæces, and recovered without difficulty.

In the *fifth case*, a strangulated inguinal hernia existed in the usual place—the operation was performed, but M. Sanson was surprised at the difficulty which was now encountered in returning the intestine, although the stricture at the ring and neck of the sac was sufficiently divided. He soon found that the intestine, when pushed up, accumulated above the abdominal canal; he carried his finger through the canal and observed it did not enter the cavity of the abdomen. He divided the abdominal ring, and then discovered, that above the canal the sac was dilated and formed a communication with the abdomen through a narrow aperture. The intestines were forced into this sac; the second and upper opening was enlarged, and the reduction effected.

63. *Extirpation of the Uterus.*—In the seventeeth and eighteenth numbers of this Journal, for January and April last, we republished some of the accounts of extirpation of the uterus *in situ*. In the last mentioned number we suggested some doubts of the propriety and even of the morality of such attempts, and have now further accounts to present, which are discouraging, and would limit exceedingly the utility of the operation.

The *Archives Generales* for July records the subsequent experience of the French surgeons. The first patient of Recamier's, (Vide Vol. IX, p. 225) who was subjected to the operation the 26th of July 1829, left the Hotel Dieu in about two months. Since then she had been several times carefully examined; there was frequent desire to urinate, rarely did she pass an hour without emptying the bladder; often during the night the urine flowed unrestrained, and not unfrequently there was an incontinence during the day. This, combined with

constipation, excited pain in the hypogastric region, and œdema of the external genital organs. In this state she entered the hospital December 1829. The vagina, cicatrix, &c. were found unaltered. After a few days she was again discharged. In the following April she was admitted with dysenteric symptoms, which were checked by opium. No alteration in the vagina, &c. was perceived, after a careful examination by Recamier and many other surgeons; and her general health was not seriously impaired. It appears, however, that the diarrhœa continued, and was aggravated by improper management, so that the patient, who did not return to the Hotel Dieu, died on the 12th of June 1830.

Another case is minutely detailed, in which the patient, aged thirty-six years, and who had been under the care of M. Casimir Broussais and others, was operated on by M. Recamier, on the 13th of January last, in the presence of MM. Marjolin, Lisfranc, Blondin, &c. She appeared to do well until the afternoon of the next day, when an arterial hemorrhage appeared from the vagina, and the patient died thirty-three hours after the operation.

Post mortem. It was discovered, by an aqueous injection into the aorta, that the hemorrhage had proceeded from the left uterine artery. The ovaries and tubes had been removed with the uterus. The rectum was uninjured; the vagina was sound—all the diseased structure had been extirpated; there was on the bas fond of the bladder a very small orifice, through which urine had escaped. The peritoneum of this region was raised by æriform fluids; there were no signs of peritonitis, and other organs were healthy.

In the month of April following, another promising case occurred: the operation was decided upon and the time fixed, but the fears of the patient brought on a hemorrhage. The operation was deferred from this and other causes, for six weeks. It was then attempted, but owing to the want of firmness of the neck of the uterus, the instruments were torn out in every attempt to draw down the uterus; the hemorrhage was great, the pain excessive, (*atroces*) and hence the patient was abandoned to her fate. She afterwards left the Hotel Dieu.

Another patient, with cancer uteri, was placed under the care of M. Recamier; but this gentleman, with true professional liberality, submitted the case to a well instructed young surgeon, M. Dubled, who, at the sitting of the Royal Academy of Medicine, on the 11th of May, had read a memoir on an important modification of the mode of operating hitherto practised, and who had happily exemplified, on the dead subject, his peculiar views. With these M. Recamier was pleased.

The operation was performed by M. Dubled therefore, in the presence of MM. Recamier, Lisfranc, and many others, and, according to the report, in a very satisfactory manner. The details are given, for which we have not room. Suffice it to observe, that nervous and febrile symptoms supervened towards evening; she was bled, and also leeched on the hypogastric region; some hemorrhage came on from the vagina; the nervous symptoms continued; her strength failed, and she died in twenty-two hours after the operation.

Dissection manifested that the operation had been performed with great accuracy; the ligatures were properly fixed, and there was no peritonitis.

VIII. MIDWIFERY.

64. *Abortion.*—The following communication from a respected and intelligent medical friend, Dr R. Lee Fearn, of Alabama, will be found interesting, and may prove of importance to the practitioner.

"I have a negro servant, who, in 1820 or 1821, was married, being then just thirteen years old. She soon became pregnant—and lost her child about the fifth or sixth month: she had lost five children at about the fifth month, at the time of her entering her sixteenth year, when she carried one to the seventh month or nearly. On consultation with several very respectable physicians, it was thought that a separation from her husband would be highly useful; they were accordingly separated at a considerable distance, for nearly two years, and

we have reason to believe, with the utmost fidelity to each other. About five months after she came to her husband in this county, my brother and Dr A. Erskine being in attendance, could not prevent an abortion; she continued to lose two a year, with no pain of any consequence, or other inconvenience, more than is usual for a few hours. At this juncture, I (being in the Philadelphia Alms-house) consulted Dr Chapman, Dr Dewees, Dr Jackson, and others, and wrote to my brother, all to no avail. I found her, on my return home, again pregnant, with an extremely robust constitution, &c. and attended to her every day. She was delivered on the 25th of December last, at the full period of gestation, of a large boy, who is now alive, after having aborted ten or eleven times in nine years. My treatment, in addition to what is usual and what had been used frequently with her, that is venesection, laxatives, absolute rest, &c. consisted in the internal use of the tincture of cantharides, in such quantities as to keep up continual strangury, and also in having the lumbar region over the spine rubbed with the terebinthinate decoction of cantharides, (an excellent article so frequently used in the Alms-house) so as to keep the part continually excoriated. When the strangury became excessive, I used the usual means to mitigate it, and then continued the medicine."

65. *Prolapsus Uteri.*—In the New York Medical Journal, Vol. I. No 1, Dr Barker has made some judicious observations on the treatment of this troublesome complaint, and has proposed a modification of the gum elastic pessary, which, he says from experience, is very convenient and effectual. The indication is to keep the uterus in its proper position, without inconvenience to the patient. The more completely therefore the vagina can be filled without uneasiness, the more effectual will be the reduction; and experience would seem to prove that the globular or ovoid form is superior to any other. But practitioners are aware, that pessaries of this form are with difficulty introduced and removed, and hence one of sufficient size to pass the os externum will not always fulfil the requisite indications. Flat circular, and oval pessaries are hence substituted, and often effectually, but still in some instances completely fail. Mr Barker therefore proposes a hollow gum elastic pessary of a pyriform shape, and as large as may be required, into the neck of which is to be inserted a small ivory tube containing a valve and spring, and surmounted by a silver cap with an orifice at its extremity. This is to be introduced in a flaccid condition into the vagina, which can be easily accomplished: then by means of brass tubes, straight and curved, furnished with stop-cocks, and of a common gum elastic injecting bag, atmospheric air can be forced into the pessary so as to distend it as much as may be necessary. The injecting bag and tubes being removed, the air will not escape, owing to the valve in the neck of the instrument. When desirous of removing the pessary, the valve is to be depressed so as to allow the air to escape, when the whole can be with facility extracted; should any difficulty occur, exhaustion of the pessary could be readily effected by means of the tubes and the elastic bag. The advantages of this pessary are, 1. Its ready introduction and removal. 2. Its capability of being distended to any required magnitude. 3. That the patient can herself introduce and withdraw it. And, 4. That its size can be very gradually diminished as the vagina contracts and gains tone, until it may altogether be omitted.

Dr Barker says it might be removed at every menstrual period, and even oftener, say once a week, that astringent injections may be employed and the vagina allowed to contract.

66. *Gastrotomy, successfully performed after a Rupture of the Uterus.*—From the *Jour. des Progrès*, vol. 3, for 1830, we learn that Dr Salemi of Palermo, Sicily, relates the case of a female, aged thirty-six, pregnant with her ninth child, who fell from her bed during the second month of gestation, and afterwards suffered great disorder in the uterine region. At the ninth month, there was no indication of labour, but pain in the epigastric region was experienced and became insupportable, attended by an inflammatory fever, severe headach and disposition to stupor. For some days, a small quantity of coagulated blood flowed per

vaginam: the lower extremities and the abdomen swelled; the hemorrhage from the vagina ceased and a purulent discharge succeeded and continued to the tenth month. The patient's life seemed in great danger, a tumour appeared in the umbilical region, which opened in a short time and discharged a very fœtid matter. Dr Salemi now visited this patient, and found her almost dead. Having heard the history and examined the abdomen carefully, he concluded that there had been a rupture of the uterus at the second month, that the fœtus had then passed into the abdomen and was now contained in the tumour. He therefore enlarged the fistulous opening, and through it extracted a fœtus piecemeal; first the right arm and then the whole trunk: the right foot two hours previously had been spontaneously discharged per vaginam. The effluvia from the fœtus was intolerable. The wound was dressed secundum artem, and the female left completely at rest. From this time, the recovery was rapid; the edges of the rupture in the uterus, of which the anterior portions were very visible, united and the wound in the abdomen quickly healed, so that scarcely a month elapsed before the patient was perfectly well.

This operation, falsely termed "gastrotomy" according to the technical meaning of the word, consisted in merely opening an abscess, caused by, and containing a fœtus, and it is to be regretted that a suitable acquaintance with the doctrines of adhesion and ulceration is so rare an accomplishment, that comparatively few are prepared for understanding even the nature of this state of things, and of course, for adopting a judicious and successful treatment. Gastrotomy, or the opening the general peritoneal cavity of the abdomen, where there are no adhesions and of course no cyst, or the Cæsarian section, in which there is, in addition, a division also of the uterine tissue, is much more dangerous, and although not unfrequently requisite and successful, should not be lightly undertaken.

67. *Rupture of the Perinæum.*—We learn from the *Transactions Medicales* for August, that at the sitting of the Royal Academy of Medicine in June, a discussion ensued as to the passage of the child's head through a central rupture of the perinæum. M. Moreau presented certain facts and observations to show that this rupture was the result of the presentation of the fœtus in one of the three last positions of the vertex. M. Capuron however maintained, that this accident probably never depended on this presentation, because when the head has its ordinary volume, a natural accouchement is impossible; assistance will be necessary; and if these labours do occur naturally, the head is then small, and sufficient violence will not be offered to rupture the perinæum. The reason why there can be no natural labour, when the head is of the ordinary size, in the three last presentations of the vertex, arises from the necessity that the oblique diameter should be confounded with the axis of the pelvis, which cannot occur in case of an ordinary sized head, in consequence of the neck preventing a sufficient flexure of the head.

M. Gendrin, the editor of the *Trans. Medicales*, in a note on the above, agrees with M. Capuron, that it is impossible in a well formed pelvis for the head, when of common dimensions, and with the forehead to the pubis, to pass without assistance; but he says, it is no less certain, that under these circumstances, the head, even when of smaller size than natural, does powerfully press on the perineum, and that the fourchette is much less compressed than the central portions of the perinæum. In such cases, it may easily be conceived that a rupture may occur at the centre of the perinæum. It may, however, be always possible to prevent its occurrence. Hence, when the practitioner observes the head thus engaged, and descending rapidly along the coccygeo-perineal surface, the direct means of prevention is to support the head itself rather than the perinæum. A curved lever, the lever of Roonhuisen, introduced under the occiput, fulfils completely this indication. M. Mesnard proposes to pass two fingers between the head and the perinæum; but this is insufficient; the fingers must increase the distension, and cannot act with sufficient force: but this is not the case with the lever, a powerful and too much neglected instrument. In employing it, power may be exercised over the flexion and rotation of the head, the occiput can be made to descend more rapidly, and the forehead at the same time to ascend behind the

pubis, and a labour, which in most cases is terminated by means of the forceps, can thus be effected. The use of forceps also might give rise to the perineal rupture. In cases also where rupture is threatened, in consequence of the small size of the vulva, from cicatrices or other causes, a rupture may be prevented by carefully dividing the fourchette by means of a bistoury, so as to allow the issue of the head. The wound is very much diminished in size, by the subsequent contraction of the parts, and no inconvenience results, while much is hereby prevented. M. Champenois, and also M. Trinchinetti have observed facts of this kind.

IX. CHEMISTRY.

68. *Light emitted during the Compression of Gases.*—A memoir on this subject, by M. Thenard, was read before the French Academy, on the 21st of June last. M. Saissy had observed that two gases, oxygen and chlorine, emit light when forcibly compressed. M. Thenard repeated the experiments of M. Saissy, and found, that if the greased leathers of the pistons employed for compressing the gases be replaced by hat-felt, thoroughly moistened with water, and the cylinder be perfectly clean, the phenomenon will not take place. It is thus proved that the light emitted during the compression of the above mentioned gases, is owing to the inflammation of a minute portion of combustible matter, derived either from the materials of the piston, or from some accidental impurity in the cylinder in which the compression is made. The reason why no light was observed in M. Saissy's experiments, except in the cases of oxygen and chlorine, is that no other gases support combustion. *Journ. de Chimie Méd. No. XVI. Aug.* 1830.

69. *Variations in the Carbonic Acid of the Atmosphere.*—In the *Journal de Chimie Medicale*, No. XVI, for Aug. 1830, an abstract is given of a very elaborate memoir, by M. Theodore de Saussure, addressed by that distinguished chemist to the French Academy of Sciences. The following were his results:

1. The quantity of carbonic acid in the atmosphere, *in the daytime*, is greater in town than in the country.

2. The variations of the acid, dependent on season, are similar in the two situations.

3. The acid is increased more by the influence of night in the country than in town.

4. The air over the lake of Geneva contains, in general, less carbonic acid than that over the ground.

5. In the daytime, the quantity of carbonic acid, in the open champagne country, is ordinarily increased by wind; but this augmentation is too minute to be appreciated, otherwise than by striking a mean result from many observations. The variations which the author observed in the carbonic acid in the open country were due to two principal causes: 1. The opposite changes of night and day; darkness having the power of augmenting, and light of diminishing the proportion of this acid. 2. The condition of the soil, as to moisture and dryness; the former diminishing, and the latter increasing the amount of the acid.

6. The upper strata of the atmosphere contain more carbonic acid than the lower.

The variation of the carbonic acid by the opposite influence of day and night, is hardly appreciable in the upper strata: they appear to be more affected by the slower variations produced in the inferior strata, by a general humid state of the soil.

The variation, dependent on the alternation of day and night, is but small in the streets of Geneva, but it is considerable over the adjacent lake, which offers no obstruction to the lateral circulation of the air.

Lastly, a violent wind in the daytime usually increases the carbonic acid in the inferior strata, but prevents, either wholly or in part, the augmentation which takes place in this gas, in calm weather, through the influence of the night.

70. *Peculiar Vegetable Acid.*—At a meeting of the French Institute on the 9th of August last, M. Dulong communicated a letter from Berzelius, in which he details some curious results in relation to a new vegetable acid existing in tartar. This acid is called in Germany by the name of *voghesensaure* (acid of Vosges). My analysis of tartaric acid, says Berzelius, differing from that of Prout, in whose experimental researches I have the greatest confidence, I was induced to reject it, and afterwards I arrived at the same result with him. But after having analysed the acid of Vosges, I found that it had the same composition and the same atomic weight with tartaric acid. The two genera of salts formed by these two acids, combining with the same number of atoms of water, and the same species being heteromorphous, it remained to be proved that two compound bodies of the same number of elements, and in the same proportions, could present different chemical properties and crystalline forms. This is obviously the reverse of the principle of the isomorphism of compounds, formed of elements of different natures, united in the same atonic proportions.

We already know several examples, similar to that of the existence of two tartaric acids, both among inorganic and organic compounds. Thus we have the phosphoric acid long known, and the calcined phosphoric acid, two peroxides of tin of the same composition, (stannic oxides,) and liquid and coagulated albumen. Berzelius proposes to call compounds of identical composition, but different properties, by the name *izomeres;* and to distinguish the different *izomere* combinations, by prefixing the Greek preposition παρα, before the name of one of them. Thus we should have phosphoric acid and paraphosphoric acid, stannic oxide and parastannic oxide, &c.—*Journal de Chimie Méd. No. XVII. Sep.* 1830.

71. *Arsenic detected in Common Salt, by MM. A. Latour and Lefrançois.*—The salt in question was whiter than natural, and presented numerous crystals, covered with a whitish matter, which was easily rubbed off. When tasted, it left in the back part of the mouth an acrid and bitter flavour. Several members of a family of Paris having been rendered indisposed, this salt was suspected to be the cause, from its appearance being different from that of good salt.

The whitish matter, proving to be sulphate of lime, did not explain the bad qualities of the salt. The experimenters then searched for iodine, which was detected in too minute a portion to be of any consequence. Recollecting that an unwholesome salt used in the canton of Sézanne, had been found to contain arsenic, they examined the suspected salt for that metal, and fully verified its presence both by sulphuretted hydrogen, and ultimately by reduction. The arsenic was in the form of arsenious acid, and in the proportion of a quarter of a grain to the ounce of salt.

The editors of the *Journal de Chimie Méd.* explain the presence conjointly of sulphate of lime and arsenic as follows: powdered sulphate of lime is sold to be mixed with salt, under the name of "soda for mixing with salt." The same powder is mixed by many druggists with powered white arsenic. Now the editors suppose that in some manufactory where arsenic is powdered, the sulphate of lime has been likewise powdered, for the double purpose of mixing with arsenic and with common salt; and that a portion of the sulphate of lime, used to adulterate salt, has accidentally got mixed with a small portion of arsenic.—*Jour. de Chimie Méd. No. XV. Aug.* 1830.

72. *Hematosin and Globulin; by M. Lecanu.*—A paper on this subject was read before the French Academy of Sciences in August last. The author gives the name of *globulin* to the colouring matter of the blood, brought to a higher degree of purity than in the state called *hematosin.* After having passed in review the labours of Wells, Fourcroy, Berzelius, and Brande, he enumerates the processes for separating the colouring matter, proposed successively by Vauquelin, Brande, Engelhart, and Berzelius. M. Lecanu regards the process of the last mentioned chemist as the best, but has thought proper to introduce some slight modifications in it, with a view of obtaining the matter in the highest degree of purity.

After having divided a considerable quantity of the coagulum of beef's blood, completely drained, into very small pieces, it is treated repeatedly with distilled water, taking care, each time, to subject the remaining mass to a strong compression in linen. The liquor is then filtered, and allowed to evaporate in large plates in the sun. The product of this evaporation is the colouring matter, as pure as it is possible to obtain it by any process yet known. Hematosin, thus obtained, is solid, and black and brilliant, like jet, when viewed in mass; dull and brick-coloured, when in powder; and brilliant, translucid and reddish, in thin pieces. Cold water dissolves it readily, and gives rise to a solution of a beautiful red colour, and possessing an extremely nauseous smell and taste. The solution may be kept for several months without undergoing, apparently, any alteration, and by a spontaneous evaporation, the hematosin may be recovered, possessing its original properties. When exposed to a heat of 158° of Fahr. it loses its colour, and deposits the colouring matter in brown flocks, now become completely insoluble in water.

With muriatic acid, hematosin produces a solution of a nearly black colour, which is not rendered turbid by the application of heat, and from which ammonia precipitates the colouring matter. This solution, according to the author, may be considered as a muriate of hematosin, possessing, as it does, the characters of the muriates; which is the case also with similar solutions of albumen and fibrin in muriatic acid.

According to M. Lecanu, 100 parts of hematosin, taking the mean of three experiments, contain

Animal matter,	97.742
Alkaline carbonates and muriates, Carbonate of lime and of magnesia, Phosphate of lime and of magnesia,	1.724
Peroxide of iron,	534
	100.

Berzelius's analysis of the colouring matter of blood, gives, in the 100 parts,

Animal matter,	98.750
Subphosphate of iron, Phosphate of lime and of magnesia, Pure lime, Carbonic acid,	0.625
Oxide of iron	0.625
	100.

M. Lecanu supposes that the hematosin or colouring matter of the blood of former chemists, is in fact a compound of albumen and the pure colouring matter, which he proposes to call *globulin*.—*Journ. de Chimie Méd. No. XVIII, September* 1830.

73. *Caseiform matter on the Skin of New-born Infants, by M. Peschier of Geneva.*—This matter is white, soft to the touch, insoluble in water, without odour, and having the appearance of cerate. Placed on paper, it produces a greasy stain. Absolute alcohol in the cold has no action on it, but dissolves three-fourths at the temperature of ebullition. Exposed upon a metallic plate to the flame of a candle, it at first diffused the agreeable odour of warm butter, and afterwards curled up, and crackled like fatty bodies, which contain aqueous particles. At a higher temperature, it entered into fusion, emitting the odour of wax and of azotized substances.

From his results, M. Peschier concludes that the caseiform matter of new-born infants is a compound of a fatty substance, of the nature of butter, of modified gelatin, and a little sulphur.—*Journ. de Chimie Méd. No. XVIII, September* 1830.

74. *Siliceous Calculus.*—M. Lassaigne has subjected a urethral calculus from a male lamb to analysis, and found it to consist nearly entirely of silica, joined, however, with some animal matter, and a minute quantity of peroxide of iron.

M. Lassaigne supposes that the urine of lambs probably contains a portion of silica; and we will add that the urine of the animal from which the calculus was obtained, probably contained this earth in excess. Human urine has been proved, by Berzelius, to contain a minute portion of silica, which he supposes to be derived from the water used as drink, which generally contains a minute portion of this earth. No well authenticated case is known of a siliceous calculus in the human subject; but according to MM. Guesnayer, Dumar, and Guibourt, siliceous granules are occasionally voided by the sick.—*Journ. de Chimie Med. No. XV, August* 1830.

75. *Penetrativeness of Fluids.*—Dr Mitchell, Lecturer on Medical Chemistry in the Medical Institute of this city, has published an interesting experimental paper under this title in the American Journal of the Medical Sciences for November 1830. The facts which he has noted belong to the same class of phenomena, as those observed by Mr Graham on gases, in relation to their spontaneous diffusion through each other, and by Dutrochet, on liquids, under the titles of *endosmose* and *exosmose;* but at the same time furnish a large accession to our previous stock of knowledge on this difficult subject. It would seem that fluids, whether elastic or non-elastic, have different powers of diffusing themselves through each other; and that if they ultimately mix equally, it by no means follows that they have equally concurred in producing the result. Dr Mitchell, in his paper, has principally investigated the modification produced, where the diffusing fluids are separated from each other by thin vegetable or animal membranes, such as sheet caoutchouc, (manufactured by his peculiar process), or pieces of bladder or intestine. Under such circumstances, in the great majority of cases, the membrane is pressed towards one of the fluids experimented on, and from the other. Thus suppose the two fluids be atmospheric air and hydrogen. Suppose the hydrogen to be enclosed in a wide-mouthed bottle, by means of a thin sheet of caoutchouc. The bottle being immersed in the atmosphere, we have the conditions of the two gases named being separated from each other by a plane of thin membrane. Under these circumstances Dr Mitchell found that in a few hours the membranous cover was pressed into the bottle, and finally burst inwards by the pressure of the atmosphere. Upon reversing the experiment, that is, tying up some atmospheric air in a bottle, and immersing it in an atmosphere of hydrogen, the hydrogen made its way into the bottle, bulged out the membrane, and burst it outwards.

In pursuing these experiments, Dr Mitchell found that the diffusing or penetrating power of certain gases in relation to others was so great, that they would penetrate, even where the penetrated gas was subjected to the pressure of a column of mercury, raising such column to a considerable height.

Dr Mitchell ascertained the relative penetrativeness of the following gases with reference to sheet caoutchouc, and arranges them in the following order, beginning with the most powerful:—Ammonia, sulphuretted hydrogen, cyanogen, carbonic acid, nitrous oxide, arsenuretted hydrogen, olefiant gas, hydrogen, oxygen, carbonic oxide, nitrogen.

According to Mr Graham, the comparative diffusibility of the following gases is represented by the following order, beginning with the most diffusible gas:—hydrogen, carburetted hydrogen, ammonia, olefiant gas, carbonic acid, sulphurous acid, chlorine.

It is difficult to explain these phenomena. We incline to believe, however, that penetrativeness and diffusibility are the same thing; that is, assume different diffusibilities, and suppose the membranes equally permeable to all gases, then the phenomena of certain gases crowding into the shut up spaces occupied by other gases, and, when shut up themselves, flying off from their confined situations, may be explained.

We regret that our time and space do not permit us to give a fuller notice of the valuable paper of Dr Mitchell

MISCELLANEOUS.

OBSERVATIONS ON THE BLOOD. BY W. STEVENS, M.D., &c. &c.

[Read at the Royal College of Physicians, May 3, 1830.—London.]

We have to reproach ourselves for not having noticed this interesting memoir in our last number, and in a more formal manner than the present. We had hoped to have presented the subject of which it treats somewhat *in extenso* to our readers, but our intentions must be deferred for a while.

The leading object with the author of the "Observations," is to show that the blood, in the yellow fever, at least the more malignant forms, is then dissolved as it were, and black in both arteries and veins, and bears a close resemblance to the black vomit; so close indeed, that it was often impossible to distinguish the one from the other, when exhibited in a glass. The fibrin of such blood is not formed in the usual quantity, and the saline matters are also deficient, indicated, among other means, by a loss of the saline taste. The dissolved state of the blood, though the effect and not the cause of fever, is, however, the direct cause of death. From these premises, rendered more satisfactory by direct experiments on the blood, Dr Stevens is led to the conclusion, that to correct the chemical changes in the blood, which would be productive of fatal results, saline medicines, freely given, are all important, and are in practice very successful. Blood just drawn from the body is rendered dark and black by acids, and also by the pure alkalies, and becomes fluid and loses many of its peculiar qualities. On the contrary, the neutral salts immediately change the venous blood from a dark modena red to a bright arterial. "Even the salts that contain a slight excess of alkali, as the subcarbonate of soda, for example, mixed, give to venous blood a beautiful bright arterial colour." Still further, "when the neutral salts were mixed with the dark and dissolved blood that had been taken from the heart of those who died of the yellow fever, even this black and dissolved fluid was immediately changed from black to a bright arterial colour."

The treatment of fevers in the West Indies, based on this theory, has, Dr Stevens assures us, and we have entire conviction of the correctness of what he asserts, been eminently successful—"having stood the test in several hundred cases." Dr George William Stedman, now of St Thomas's; Mr Greatrex, surgeon of the royals in the garrison of Trinidad; and others, are cited as corroborating testimony of the uncommon success of this practice. But let us not mistake Dr Stevens—he does not recommend these saline medicines as a specific in all stages of the disease. Where the excitement is high and well marked, he advocates the free use of the lancet at the onset of the disease, and then has recourse to the measures just indicated, to correct the dissolved state of the blood; for although bleeding may prevent the disorganization of parts, and thus retard death, and in some cases directly save life, it is not competent to restore the circulating fluid to its healthy saline and fibrinous state.

Dr Stevens says, "it can be clearly proved, that in the West India fevers, those patients that are left entirely to themselves, have a much better chance of recovery than those who are treated with emetics, calomel or antimony, opium,

or acids; and that these remedies, instead of being useful, add greatly to the sufferings of the patients; they decidedly increase the very evils that they are meant to relieve, and add greatly to the mortality in hot climates." We have good reason to believe that Dr S. has some curious documents, which will perhaps find a place in his forthcoming work on tropical fevers, to show that what is here said of the above kinds of practice in the West Indies, will apply too well to the treatment adopted in some of the visitations of yellow fever in the Spanish cities.

Dr Stevens concludes his observations in these words: "after having seen much to convince me that this is the fact, I adopted a mode of treatment widely different from that which I had formerly used, and in as far as it has yet gone, the use of the Rochelle salt, the carbonate of soda, and other active saline medicines, at a proper period of the disease, has been attended with a run of success, to which the mere solidists can produce no parallel; and having so often seen this mode of treatment fairly put to the test, I am induced to believe, that if the practice is generally adopted, the mortality from fever in hot climates will be greatly lessened. So long as we considered fever as a disease of the mere solids, and treated it as such, we had no command over the disease; but from the moment that we considered fever as a disease of both the solids and the fluids, and met it accordingly, we have been able to prevent much suffering, to save many valuable lives, and in those islands where this treatment has been fairly tried, that hitherto fatal disease has, in a great measure, been disarmed of its terrors."

These views of Dr Stevens, distinctly advanced by Bichat, and since corroborated by Magendie, Mayer, and others distinguished in physiology, are, we believe, in the main, now admitted by the most observant pathologists.

We perceive by the number of the *Revue Medicale* for July 1830, that at the session of the Royal Academy of Medicine at Paris, of the 8th of June preceding, M. Gerardin stated, that "he was in the United States at the period when ergot was in its greatest vogue as a means of accelerating the delivery of the fœtus, —but so many instances of still-born children occurred, that the government had instituted an inquiry into the causes by which these were occasioned; with the result of this inquiry, he added, he was unacquainted, it not having been published at the period of his departure for France."

On this subject M. Gèrardin has, from some cause, been undoubtedly led into an error. The government of this country has never, we believe, directed any inquiry to be made of the nature alluded to; nor are we aware that, taking the whole United States, the proportion of still-born children is greater here than what occurs in Europe. Some inquiry of the kind may however have been instituted by one of the State Medical Societies.

With respect to the ergot, the general opinion of the profession in this country is still favourable. That there do occur many cases in which the article may be employed by the judicious practitioner to accelerate labour, with decided advantage to both mother and child, there can be no possible doubt. But from what we know of the very hasty and indiscreet manner in which it is too often resorted to, we fear that its introduction into obstetrical practice has, upon the whole, been productive of more harm than good.

Bibliothek for Læger. Udgivet af directionen for det Classenske Literatur-Selskab. Redigeret af dens medlem C. Otto, M.D. Kjobenhavn. Vols. 8, 9, 10 and 11.

We have been favoured with the volumes of the Danish Medical Bibliothec for 1828—29, through the politeness of the editor, Dr Otto, of Copenhagen. With the entire contents of these volumes we have been highly gratified—they present a very favourable evidence of the state of medical science throughout Denmark, and of the zeal with which its several branches continue to be cultivated by the physicians of that country.

The Bibliothec is published every three months at Copenhagen, in numbers containing about 200 pages. Each number consists, 1st. Of original communications, the majority of which are of a highly interesting character. 2dly. Of translations and extracts from foreign medical publications. These are mostly

from the French and German Journals—occasionally, however, an article is translated from the English. In this department two papers occur of uncommon interest. We allude to one "on the softening of different organs of the human body, by Dr Hesse of Germany," and an account "of the treatment of syphilis without mercury in the Hospital at Hamburg, by Dr Frick of that city." These, and one or two other articles, we should have inserted in our quarterly summary had it not been for their great length and the impossibility of doing justice to them by a further abridgement. 3dly. Reviews and critical notices. 4thly. A summary of medical intelligence. In the latter department we find the contents of our own Journal and of our respected contemporary, the American Journal of the Medical Sciences, repeatedly noticed. 5thly. Miscellaneous articles, generally of a local character. We hope to be enabled to lay before our readers on future occasions frequent extracts from the valuable materials presented by the work under consideration.

The Practice of Medicine according to the Principles of the Physiological Doctrine. By J. Coster, M.D. Translated from the French, 8vo, pp. 319. Philadelphia edition, 1830. Carey & Lea.

Although this work can be considered only as a mere outline, it is, nevertheless, well worth the attention of all, whether students or practitioners, who are desirous of becoming acquainted with the principles of the physiological doctrines and practice. To the more voluminous treatises on these subjects it forms in fact a very excellent introduction.

We have the satisfaction to announce, that the PHARMACOPŒIA OF THE UNITED STATES, *revised by the National Medical Convention held at Washington in January* 1830, is now in the press in this city, and will shortly be published.

METEOROLOGICAL TABLE.

1830.	Temp. Highest	Temp. Lowest	Temp. Mean	Diu. Va. Greatest	Diu. Va. Least	Diu. Va. Mean	Prevailing Winds.	Rain in Inches.
January	51	10	33	18	1	8	N.W.	1.63
February	50	10	30	17		7	N.W. N.E.	2.06
March	66	20	41	25		10	S.	4.115
April	78	33	53	29	1	15	N.W. N.E.	1.815
May	78	44	63	21	4	13	S.W.	3.75
June	80	53	68	20		12	N.W. S.W.	5.99
July	90	60	76	17	2	12	S.W. N.W.	4.07
August	86	58	72	20		14	S.W. N.W.	3.87
September	83	44	64	17	4	13	S. S.E. N.W.	2.93
October	70	46	54	23		10	N.W. N.E.	4.31
November	65	36	50	14		6	N.E.	5.35
December	60	8	37	13		7	N.W. N.E.	5.18
Av. tem. for the year		53					Total Rain	45.07